DOCUMENT RESUME

ED 181 631 EC 122 048

AUTHOR Kokaska, Charles J., Ed.
TITLE Career Futures for Exceptional Individuals.
INSTITUTION Council for Exceptional Children, Reston, Va. Information Services and Publications.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Feb 79
NOTE 225p.; Selected Papers from CEC's National Topical Conference on Career Education for Exceptional Individuals
AVAILABLE FROM The Council for Exceptional Children, Publication Sales, 1920 Association Dr., Reston, VA 22091 ($9.95, Publication No. 195)

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Career Education; Community Involvement; Conference Reports; Counseling; Elementary Secondary Education; *Handicapped Children; Inservice Education; Mainstreaming; Program Development; Values; Vocational Aptitude; Vocational Counseling; *Vocational Education

ABSTRACT

The 33 selected papers from the National Topical Conference on Career Education for Exceptional Individuals are divided into six sections: career education (overview and future perspectives); programing and instruction; vocational assessment and training; counseling and career information; community involvement; and preparation of training personnel. Among the titles and authors included are the following: "Career Education for Exceptional Individuals: Challenges for the Future" (K. Hoyt); "Delivering Career Education Content in Instructional Programs for Handicapped Students" (G. Clark); "Career Education Co-Op for Elementary Aged Hearing Impaired Children" (J. Richardson et al.); "Experience Based Career Education for Mildly Mentally Disabled Students" (C. Larson et al.); "Career Assessment and Alternative Vocational Services for the Handicapped" (C. Celentano et al.); "An On the Job Training Program for Emotionally Handicapped Students" (L. Cormier); "Mainstreaming and Vocational Education" (P. Sullivan and C. Creighton); "Values Clarification Approaches to Career Counseling of Exceptional Individuals and Their Parents" (T. Smorodin et al.); "The Guidance Information System: An Innovative Tool for Meeting the Career Education Needs of Individuals with Handicapping Conditions" (K. Monaco); "Career Education: A Collaborative Planning Process Between Community and School" (T. Simek et al.); "Preparing Vocational Administrators to Work with Handicapped Students" (C. Cameron et al.); and "Summary Report for Two National Working Conferences on Career Development for the Hearing Impaired" (R. Steffan and J. Egelston-Dodd). (SBH)

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CAREER FUTURES FOR EXCEPTIONAL INDIVIDUALS

Charles J. Kokaska
Editor

Selected Papers from
CEC's National Topical Conference
on Career Education
for Exceptional Individuals

February 7-9, 1979
St. Louis, Missouri

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EC132048

A product of the ERIC Clearinghouse on Handicapped and Gifted Children

Published in 1979 by The Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091

Library of Congress Number 79-91044

This publication was prepared with funding from the National Institute of Education, US Department of Health, Education, and Welfare under contract no. 400-76-0119. The opinions expressed in this report do not necessarily reflect the positions or policies of NIE or HEW.

Printed in the United States of America

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PREFACE

The papers in this volume were selected from the 121 general and small group sessions conducted at the National Topical Conference on Career Education for Exceptional Individuals which was sponsored by The Council for Exceptional Children in St. Louis, Missouri, on February 7-9, 1979. Approximately 18 separate themes were represented at the Conference. This diverse array of topics was organized into six sections: Overview and Future Perspectives, Instruction, Vocational Assessment and Training, Counseling and Career Information, Community Involvement, and the Preparation of Training Personnel.

Editorial expediency determined the choice of the sessions included in this book. Many valuable panel, workshop, and "cracker barrel" sessions could not be readily adapted to print. Materials that are available in government reports and through commercial sources were not considered for inclusion.

The reader may identify some gaps in the coverage of topics related to career education for exceptional individuals. These openings are due, in part, to our inability to transfer every discussion or presentation to the printed word. However, it also represents legitimate weaknesses in the state of the art. The field of career education is young and its extension to all exceptional learners has yet to be realized. In essence, the continued expansion of career education and the refinement of programs and techniques for exceptional children, youth, and adults were the motivating forces behind the Conference and this volume.

A special word of recognition and appreciation must be extended to Dr. Donn Brolin, University of Missouri-Columbia, and Angeline Gialas, Assistant Executive Director of Conventions and Training, The Council for Exceptional Children, who organized and directed the numerous sessions, committees, volunteers, and activities that are vital to the success of a national conference. This publication would not be possible without their efforts.

Finally, June B. Jordan, Editor in Chief, and Charlotte Hawkins-Shepard, Education Specialist, both of the Publications Unit, The Council for Exceptional Children, are to be commended for their support and critical assistance in making this collection a reality.

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PART I

Career Education: Overview and Future Perspectives

CAREER EDUCATION FOR EXCEPTIONAL INDIVIDUALS: CHALLENGES FOR THE FUTURE

Kenneth B. Hoyt

The 11 institutes and 118 program sessions associated with this conference have clearly demonstrated the need for, nature of, and pertinent methodology for delivering effective career education to exceptional individuals. The substantive content of this conference represents a quantum leap in knowledge over that found in 1973 when The Council for Exceptional Children (CEC), working cooperatively with the American Vocational Association, sponsored its First National Conference on Career Education. Much of the credit for this belongs to the CEC leadership. No professional association has exhibited a greater sustaining commitment to career education than CEC. I would like to express my personal gratitude to and respect for the significant contributions The Council for Exceptional Children has made to enhancing both the conceptualization and the effective delivery of career education.

I am pleased that topics included in this effort have ranged from the early elementary school years through the secondary school and college setting all the way to the adult learner. I am also pleased to note that among the topics considered some attention has been devoted to providing career education for gifted and talented persons as well as for persons with handicaps. So, too, am I pleased to see the home/family structure and the business/labor/industry community addressed as major topics on the agenda. All of these things stand as clear evidence that CEC is, indeed, talking about true career education.

The single most positive thing about these programs, in my opinion, is that they represent a good mix between special education and career education. The dual commitment represented by experts in special education dedicated to learning more about career education coupled with a commitment by experts in career education to learn more about special education is, to me, the greatest strength of the conference and our best hope for still greater progress in the future.

It is the future of career education for exceptional individuals that I have been asked to address. I want to do so from three perspectives: (A) basic emphases in career education for exceptional children that must be highlighted; (B) the potential of career education for serving as a vehicle for meeting the needs of exceptional individuals; and (C) current and projected commitments of the Office of Career Education (OCE) to this important effort.

BASIC ELEMENTS IN THE CAREER EDUCATION CONCEPT

The future of career education for exceptional individuals will, to a

large degree, be determined by the extent to which professionals in special education recognize, endorse, and implement each of the basic elements in the career education concept. Of all such elements that could be named, there are five that are especially crucial.

Extending the Goals of Education

Career education calls for extending the goals of education as preparation for work beyond vocational/occupational education. As vocational education's emphasis on providing persons with specific marketable entry level vocational skills becomes more and more necessary, it becomes less and less sufficient for today's population. In addition to such specific entry level vocational skills, persons increasingly need career education skills that will enable them to adapt to the change in the occupational society. Such skills include (A) the basic academic skills; (B) good work habits; (C) personally meaningful work values; (D) an understanding and appreciation of the private enterprise system; (E) self understanding and understanding of educational/occupational opportunities; (F) career decisionmaking skills; (G) job seeking/getting/holding skills; (H) skills in making productive use of leisure time; (I) skills required for combating bias and stereotyping as deterrents to full freedom of choice; and (J) skills required for humanizing the workplace for oneself. These are the skills career education seeks to impart.

If such skills are to be imparted to exceptional individuals as well as others, then this effort must start no later than the beginning of elementary education and extend throughout all of adult education. The special education teacher in an elementary school setting has fully as much responsibility for implementing career education as does his or her counterpart in the secondary school. Individuals charged with meeting the needs of exceptional individuals in the college/university and the adult education setting also carry this responsibility. It is essential that this most basic challenge of career education be understood and accepted by those in special education.

Approaching Educational Change

Career education should be delivered through a "drawing out," not an "adding on" approach to educational change. Career education seeks to build no empire of new courses, curricula, buildings, or specialists at the classroom level. Rather, it operates from a fundamental assumption that the basic skills it seeks to impart are already an inherent part of the total curriculum. They can be effectively delivered by simply drawing out what is already present but currently underemphasized in many classrooms.

This means that if effective career education is to be delivered to exceptional individuals it will be accomplished primarily through the efforts of professionals in special education, not specialists in career education. Specialists in career education will play a facilitative/resource role but the prime delivery agent for career education will be the classroom teacher. Thus, the future of career education for exceptional individuals is largely in the hands of classroom teachers in special education.

Fusing the Career Development and Teaching/Learning Processes

The career education concept represents a fusion of the career development process and the teaching/learning process. The career education effort is organized around the career development process but it is delivered, to a large extent, through the teaching/learning process. In its delivery career education asks classroom teachers to increase educational productivity through (A) showing students the importance of subject matter by seeing how it is needed in work; (B) providing a positive climate of

rewarding work done by the student in the classroom; (C) adding variety to the teaching/learning process by using the resources of the broader community; and (D) emphasizing and rewarding the practice of good work habits. It is important to understand that, in a generic sense, these are the four basic approaches taken by industry to increase industrial productivity. Career education simply seeks to adapt them to the classroom in an effort to increase educational productivity.

The basic approach to delivering career education through the teaching/learning process is at least as applicable to the teacher of exceptional individuals as it is to any other teacher. The extent to which this approach to teaching is applied to exceptional individuals--whether they be mainstreamed or in a special setting--will, to a large degree, determine the future effectiveness of career education for exceptional individuals.

Defining the Word Work

The career education concept operates, at a bedrock level, with a humanistic definition of the word work. The word work as it is used in career education refers to the need of all human beings to do, to accomplish, to achieve. It is the need to be someone through knowing that one has done something; the need to know that one is needed by someone else for what one can contribute. Former President Lyndon Johnson put it well when he said, "To hunger for use and to go unused represents the greatest hunger of all." Thus, those who accept career education must recognize that it extends far beyond the world of paid employment to include such areas as volunteerism, unpaid work of various kinds, work in the home/family structure, work performed in productive use of leisure time, and even the work of the student in the classroom. Career education's basic commitment is to meeting this human need for work somewhere in the individual's total lifestyle--even for those persons who cannot meet this need through the occupations they find in the world of paid employment.

This means that teachers of exceptional individuals must extend their thinking about career education far beyond the world of paid employment to the total lifestyle of the persons being served. The prime emphasis must be on the individual, not on the narrow world of the occupational society. The future of career education for exceptional individuals will be greatly affected by the extent to which this concept is accepted and implemented by professionals in the field of special education.

Making Career Education a Community Effort

Career education is a community effort, not simply an effort of the formal education system. The expertise required for the effective delivery of career education is found, in part, in the business/labor/industry/government community, not in the education system alone. In addition, the career education concept asks those who study it to recognize that the education system is but one among several community elements that act as delivery agents for career education. Both the responsibility and the accountability for career education must extend beyond the formal education system to the broader community.

In addition to the business/labor/industry/government community, the home/family structure must join with the education system in a collaborative effort to deliver effective career education. This means that specialists in the education of exceptional individuals must be willing to endorse and to participate in career education as a collaborative community effort and to share the authority, as well as the responsibility, for that effort. Career education cannot hope to succeed if it operates in an isolationist framework within the formal education system. The future of career education for exceptional

individuals will be heavily dependent on the degree to which this concept is accepted and implemented.

Each of these five elements has been well illustrated in more than one of the programs included in this conference. I emphasize them here not because they are new but simply because they represent the basic elements that will determine the future of career education for exceptional individuals. There is much to be done before they are either understood or accepted by many professionals in special education. The challenges are clear.

CAREER EDUCATION: A VEHICLE FOR USE BY SPECIAL EDUCATION

It is easy to see why career education advocates welcome the endorsement and participation of professionals in special education in the career education effort. The future of career education will depend heavily on the extent to which those in special education recognize and use career education as a vehicle for meeting their own professional responsibilities. I would like to outline three basic reasons why professionals in special education should seek to use career education as a vehicle for accomplishing their goals.

First and most important, the career education delivery system is badly needed by exceptional individuals. The human need to find personal meaning in and rewards from work as part of one's total lifestyle is certainly as basic to exceptional individuals as it is to all others. This includes, but is not limited to, the need to find meaning, success, and satisfaction in work performed in the world of paid employment. The adaptability skills of career education may be even more crucial to the career success of many exceptional individuals than are the specific vocational skills they acquire in the formal education system. I cannot imagine a truly meaningful individualized education program (IEP) for exceptional individuals that does not include an emphasis on the skills career education seeks to impart. I can only hope that this will become a reality in the near future.

Second, career education holds high potential for use in special education's current efforts aimed toward mainstreaming exceptional individuals into regular classrooms. It is a clear way of showing regular classroom teachers' needs shared in common with exceptional individuals and other individuals in the classroom. Moreover, it holds high potential for use in helping regular classroom teachers to overcome biases and stereotyping problems they may have with respect to exceptional individuals. When the exceptional individual is allowed to experience success through a career education activity, part of that feeling of worth extends to the teacher as well as to the person involved. When regular classroom teachers study the career implications of their subject matter for exceptional individuals, they are certain to learn things that will help them better understand and appreciate the potential contributions such individuals can make in the total society. The use of exceptional individuals as career role models may be as important for the education of the teacher as it is for the students. In all these ways, career education holds high potential for serving as a vehicle for overcoming bias and stereotyping in the regular classroom both on the part of regular teachers and on the part of other students. The potential of career education in this regard has, to date, been greatly underused.

Third, career education holds equally high potential for serving as a vehicle for reducing bias and stereotyping of exceptional individuals on the part of both their parents and the business/labor/industry/government community. If mainstreaming is followed, resource persons from the business/labor/industry community will encounter exceptional individuals in almost every classroom. They will be forced to think of ways in which such persons could participate in the

part of the occupational society they represent. Regular teachers should take their students on field trips and encourage them to engage in "shadow" work or internship experiences in the world of paid employment. Provisions will obviously have to be made for exceptional individuals as well as for all others. At the very least, this will result in increased awareness of, and attention to, architectural barriers found in the occupational society. At best, it will serve as an effective vehicle for reducing bias and stereotyping among employers as well as among regular classroom teachers.

The whole topic of bias and stereotyping is inextricably tied to the career education concept. Those who use the career education effort as a vehicle for overcoming bias and stereotyping should find it to be effective. Because the concerns of career education apply equally as well to exceptional individuals as they do to all others, it is a potentially powerful vehicle. I would hope that it is so recognized by professionals in special education.

OFFICE OF CAREER EDUCATION'S COMMITMENT TO EXCEPTIONAL INDIVIDUALS

The first piece of career education legislation enacted by the Congress--Public Law 93-380, Section 406, Career Education--called for a special emphasis on career education for persons with handicaps. The newest federal legislation for career education--Public Law 95-207, Career Education Incentive Act--carries that emphasis still further. There is no doubt that the Congress has intended from the beginning that career education efforts should include a conscious emphasis on meeting the career education needs of exceptional individuals.

Operating under P.L. 93-380 for the last 4 years, the Office of Career Education (OCE) has made a conscious effort to meet this Congressional mandate. Of 13 categories used for funding grant proposals, 2 have been specifically directed toward exceptional individuals--one for persons with handicaps and the other for gifted and talented individuals. Of the approximately $40 million available for use in the total career education demonstration effort, more than $3.5 million has been used in these two categories. This includes a total of 38 grants and contracts, many of whose project directors have been included as presenters at this conference. The second largest contract ever issued by OCE was in the area of bias and stereotyping and is currently in operation. Staff members from OCE have participated in a wide variety of national and state conferences concerned with career education for exceptional individuals. These efforts have added to the $3.5 million figure mentioned earlier.

The most significant action of the Office of Career Education, however has been our effort to infuse an emphasis on providing effective career education for exceptional individuals within all grants funded by OCE. There is no current OCE project director who has not been in attendance at a special workshop aimed at the potential of career education to reduce bias and stereotyping. Each of these project directors has been given a resource handbook (Newell, 1978) that specifically addresses methods and resources available for use in providing effective career education for exceptional individuals. In short, we in the Office of Career Education have been engaged in a serious and, in my opinion, significant effort to mainstream the topic of career education for exceptional individuals into every project we fund. This effort, coupled with the specific demonstration efforts mentioned earlier, means that well over 10% of the total OCE effort has been, and continues to be, devoted to providing career education for exceptional individuals.

This should not be taken to mean that we think we have done enough. Our hope is that, in the future, we can find an increasing number of ways

in which our efforts can be linked with those of persons whose primary concerns lie in serving the needs of exceptional individuals. Our specific efforts in this area will be increased if we have the funds available for doing so. We hope to be able to devote far greater effort to providing assistance to others who are also committed to this area.

CONCLUDING REMARKS

The need for career education for exceptional individuals is undeniably real--and growing bigger. That need will never be met through the efforts of the Office of Career Education or by the small band of career education specialists that now exist in various parts of the nation. To even pretend to take this route would be antagonistic to the nature of the career education concept. That is, career education is an effort that seeks to be delivered through existing programs and personnel, not through creation of a new special "empire." The future of career education for exceptional individuals is largely in the hands of professionals in the field of special education. In my opinion, that is the way it should be.

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CAREER DEVELOPMENT FOR THE DISABLED: A PROPHECY

Edward V. Roberts

It was only a few years ago that people like myself and many others in the audience were considered objects of charity. In many ways we were lucky if we obtained the kinds of services we needed to become part of the mainstream. But as you all know, that is fundamentally changed and we can talk now about basic human rights, and the right of people with disabilities to be a part of this community and every other community in this country. That fundamental right is a key to my future and to the futures of all people with disabilities. Without that right and the hard work of organizations like The Council for Exceptional Children and the independent living movement we would not have such a bright future to look forward to. We must also recognize that even though we have won basic civil rights and new mandates for deinstitutionalization and mainstreaming, we still have a long way to go.

And just as we are gaining these rights, we are entering an era of limits -- the era of Proposition 13. But with the movement of millions of young people with disabilities into our schools and into our communities to take their place with their peers, we can begin to see a positive future, one where each person has a right to develop his or her own potential, whatever that is.

We know now that so many of the old attitudes caused people to feel such hopelessness. I remember the attitudes that I faced at 14 years of age, when I went, in about 4 days, from an aspiring athlete to a helpless cripple. We know how devastating that can be for individuals and for their parents who cannot know the future. I look back to the time when my greatest fear was what would happen when my parents died. Their greatest fear was exactly the same thing. I remember the doctors telling my mother that I would be nothing more than a vegetable.

We know that disability is not the overriding factor, but instead it is a motivation. It is believing in yourself and having people around you believe in you, such as teachers who know that if they have the right kind of skills and knowledge and a basic belief in you, that nothing is going to stop you. No barrier, whether it is a 3 foot ramp to get on to the podium, a communication barrier for a deaf person, reading for a blind person, or a barrier imposed by attitudes about people who are labeled retarded, can stop that motivation.

We know now that we concentrated too much in the past on segregation and on trying to fulfill one need, the physical need. We, in fact, lost peer support. We lost so many other factors in terms of socialization, which is a critical element in how well young people with disabilities are going to live in the future. As we think about career education, we have to find innovative ways of bringing more people into contact with their peers.

We need to find ways of assuring that teachers and professionals in

special education, vocational education, vocational rehabilitation (people like all of us here today) come together as leaders and pave the way for the future. We must not be discouraged by this lack of funding. Funding is a matter of priorities and also a matter of power. You must begin to think about our potential constituency. Not only the parents of 35 to 50 million people with disabilities, but teachers and professionals in our field, have a profound impact on the future. This constituency can assure that every young person with a disability is able to achieve his or her own potential.

When I go out and talk to leaders in business and industry, I do not talk about weakness and sickness. There are plenty of people in our society who are ready to portray the disabled as sick, weak, helpless, or unable. I talk about the strengths. Those of you who have watched a young disabled child in a family situation know how that whole family revolves around that child, and how a child that is assertive can manipulate the family. That is the power of disability. Such strengths! We need to capitalize on those strengths. We need to learn how to build on the strengths people have when they come to us. I have probably hired and trained 50 to 100 personal assistants in my 25 years of being a disabled person. I am a good personnel manager right now. I know how to recognize people that I might need and that might be good for me. We need to learn to build on these kinds of skills and to recognize them as real strengths.

In terms of my own career development, one of the things that helped me the most was that I was not segregated. Our school system in Burlingame did not have separate schools. They had to figure out a way to get me from my bed as a literal shut-in to rebegin my education. I had to overcome the fear of going out and having people stare at me because I was different. Then, in my senior year of high school, I discovered it is not too bad to have people stare at you. You can take it in a negative way, or a positive way. In a negative way, you can say a person is weird or different; in a positive way, you can be a celebrity. You might as well make it a positive way or you will remain a shut-in. There were people around me who encouraged me to begin to come out. They cajoled me in a way. From that time, then, I was beginning to recognize that I had some choices, and that to get anything, I had to learn how to take risks.

Risk taking is something that too many young people with disabilities are sheltered from, for a variety of reasons. Young people with disabilities often do not learn how to take that next risk. I remember when I was at the University of California in Berkeley and I fell in love. It became incredibly inconvenient to have to take an attendant with me everywhere. I had been told for years that I could not drive a power wheelchair, that I was too severely disabled. But I decided to take the risk because I had a lot at stake. I crashed in the beginning, but then I learned how, with some help, to set up the system. Each of us takes risks every day. When we go out and step into our automobiles, we are taking the risk of being either dead or disabled.

It is important that we prepare our society for the entry of millions of young people with disabilities. With what we are doing here, and the leadership we provide in our communities, we are not only preparing the future for ourselves, but also for many others who will follow. Each person not only has the right to fulfill his or her own potential, but also to take risks, to be an integral part of school and community, and to choose early what to do with life. With people around as role models, young people with disabilities begin to see things in different perspectives.

We might start trying to encourage people with disabilities to consider teaching as a vocation. It is important to encourage those who are interested to think about working in the helping professions. Nothing helped me more than to work with other

people with disabilities.

I think the next 10 years are going to be the most exciting in the history of this whole field. And the next two or three are going to be crucial in terms of assuring that our political leaders set a priority for this group.

It is the schools that will become the primary resource for vocational rehabilitation programs. It is through all of you and through the school systems that young people can be given the kind of experience that most of their peers have. Career development and work experience are critical and must go along with academic training. Young people with disabilities must have a chance to experience varying kinds of professions, as do other people in our society.

One area we have barely begun to tap is the use of funds from the Comprehensive Employment and Training Act (CETA). Our schools can really use CETA money in a way that would be extremely helpful and productive in getting work experience for young people with disabilities.

I personally am working very hard to see that all the varying systems that come in contact with young people with disabilities work closely together. Not only are we going to have to run a tight and lean ship, but as a group and as leaders in our communities we are going to have to demonstrate the effectiveness of our approaches. I think we have come very far with the systems we have built, but it is possible to build on them further.

My dream is a continuum of services. Some people call it integrated services, but there are other names for it. This can happen if we work together and support each other.

All too often I have heard groups such as teacher's groups expressing real fears -- and no answers. No one is saying, "Hey, here is a way. Here is a way to get some money. Here are some new techniques to try." I would hope that with the leadership of this organization and of vocational rehabilitation that we will be able to turn some things around.

As you may know, we just passed what I consider a revolutionary amendment to the Rehabilitation Act of 1973. This legislation, Public Law 95-602, contains a new program for comprehensive services, which is really another name for independent living. I am personally very committed to the whole area of helping create environments where young people with disabilities will not have to experience "heavy" feelings about themselves, feelings of inadequacy, of being left out. It is through a system that deals with the whole person, family, and community that we will see a change in the "image of weakness."

We have moved a long way in the last 20 to 30 years. We recognize that people have limits, but that we cannot define those limits per person. If there is anything I learned about in my own life, it was this whole issue of limits. So many times I was told that I could not do this or that. I was even rejected by the very department I now direct. I was told that I was too disabled to work. It is an irony.

But we do not need to look back. We need to look ahead together. I would hope that in the next few years we can once again show that through organizations like CEC there is nothing we cannot do.

We believe that there are thousands of disabilities that we could prevent. Together we continually need to emphasize prevention. When disability does occur, we can minimize the effects of the disability and maximize the person's ability. We can help shape and let them shape their own lives, and we must do it as a team.

There is little doubt in my mind that this next generation of young people is going to fulfill our prophecy. If we believe in each one of these young people and in ourselves, the future is going to work for us. We will get the results that we need. Teachers will get the kind of training that they need. There will be aides

in schools so that young people who need special attention can get it. That is my vision, and I hope it is your vision. Together we can make it possible.

PART II

Programing and Instruction

DELIVERING CAREER EDUCATION CONTENT IN INSTRUCTIONAL PROGRAMS FOR HANDICAPPED STUDENTS

Gary M. Clark

Since the 1930's there has been a group in the field of art that has followed the notion that form follows function. This means that if one wants to fashion a cup, a vase, or a pot, one must know who will be using the object and for what purpose. Since the field of education is probably more related to art than science, this notion has some relevance as the current problems and issues of educating children and youth are considered. It is particularly appropriate in special education today as the pressures of meeting mandates and avoiding litigation are dominating professional educators' efforts to function. Under such pressures, the tendency is to lose sight of "function" and reach for any "form" available.

In the context of delivering career education content to all handicapped students (kindergarten through 12th grade) function relates to purpose, direction, and content of career education. Form relates to approach and environment or administrative arrangement.

FUNCTIONAL MODEL

If the concept form follows function has relevance in the context of this problem, professionals must start with a planned, deliberate decision on what constitutes the appropriate function in career education for the handicapped. Currently, there are at least two models that can serve as a function model (Brolin & Kokaska, 1979; Clark, 1979). The models are similar and highly compatible. Both make an obvious case for an expanded view of career education beyond the typical focus on occupational awareness, exploration, and preparation--the conventional view.

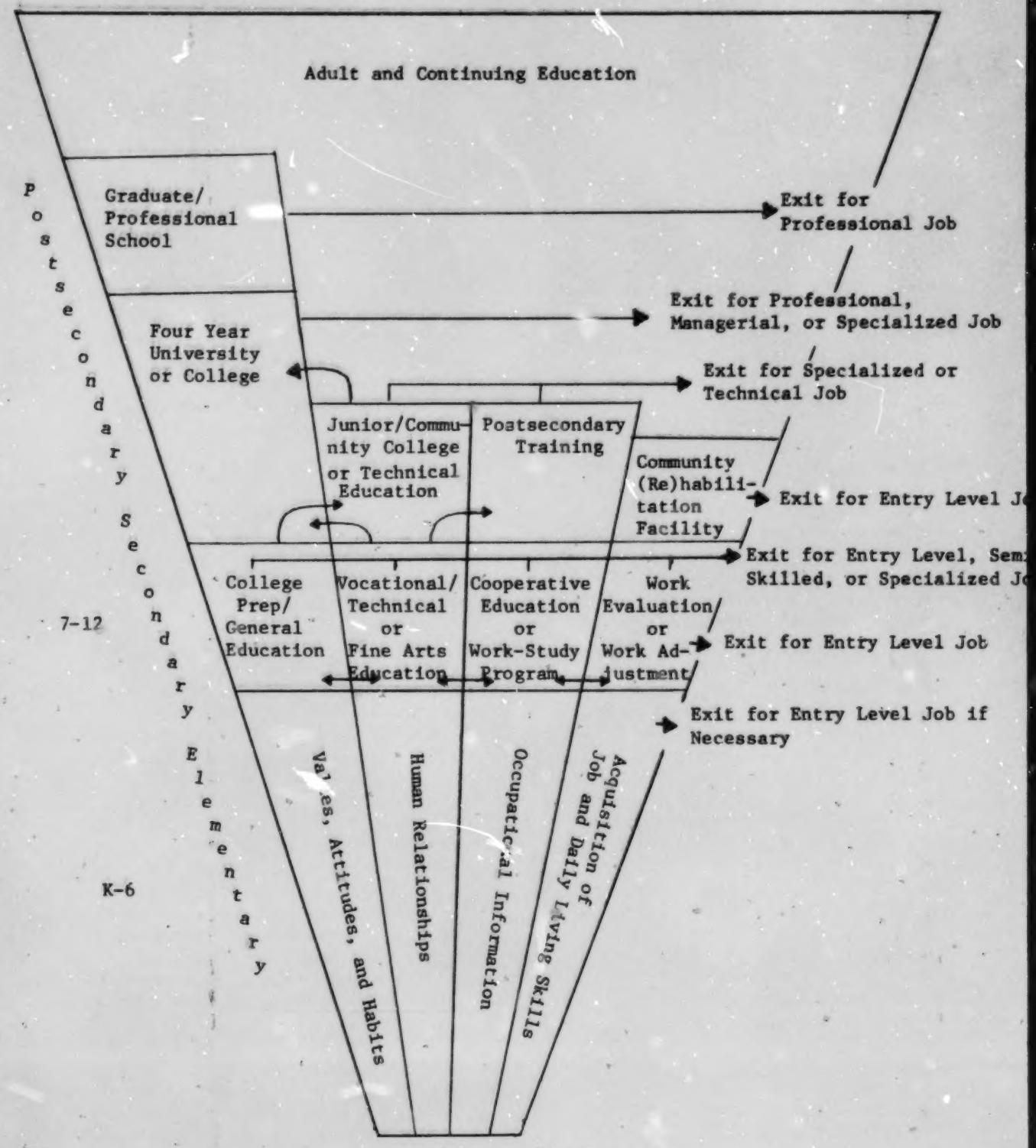
THE CLARK MODEL

The Clark (1979) model is presented in Figure 1. The focus on the function of career education is clearly based on the four content area components designed for kindergarten through 12th grade.

Part of the consideration, and ultimately the acceptance, of a functional model depends upon what basic assumptions are made to support the model. The assumptions that are made in support of the Clark model are based on those presented in Clark (1979) and include the following:

1. Career education is for all persons --young and old, gifted and retarded, mildly and severely handicapped, males and females, the poor and affluent, and all races and ethnic groups.
2. One's career is a developmental process and is subject to planning, programing, and change.
3. The nature of our society demands that career education consider a variety of work values rather than a single work ethic.
4. Career education is concerned with

FIGURE 1. A School-Based Career Education Model for the Handicapped



protecting each developing person's freedom to make choices and decisions while, at the same time, assisting him or her to know what the alternatives are.

5. Significant deprivation in any aspect of human growth can affect career development.
6. There are many historical and current limitations imposed by society upon the life career development of the handicapped.
7. Any person choosing to participate as a producer or consumer in today's complex and rapidly changing world must possess adaptability skills.
8. Career education for physically and/or mentally handicapped individuals differs significantly enough from that for the nonhandicapped that some special attention should be given to programing.
9. Just as there is a need for differential programing at times between the handicapped and the nonhandicapped, there is also a need for some differential programing among the various disability groups within the handicapped population.
10. Career education programing for the handicapped should be initiated as early as kindergarten.
11. A democratic philosophy of education and a realistic philosophy of normalization do not dictate that all children have the same curriculum.

Given this model and set of assumptions, the function of career education for the handicapped can be synthesized through the following list of teacher tasks that reflect purpose, direction, and content.

1. Integrate, to the fullest extent possible, the assumptions of career education for the handicapped into instructional activities.
2. Help pupils develop, clarify, and assimilate personally meaningful attitudes, habits, and values.
3. Help pupils develop and demonstrate behaviors reflecting positive human relationships.
4. Help pupils acquire information in occupational alternatives.
5. Help pupils acquire cognitive and psychomotor skills needed for or related to actual job and/or daily living performance.
6. Use or devise methods and materials designed to help pupils understand and appreciate the career development implications of whatever subject matter is being taught.
7. Use career oriented methods and materials in the instructional program, where appropriate, as one means of motivation for learning.

FORM

At this point, form or delivery should be considered. Again, it is highly inappropriate to make any decisions regarding form or delivery approach until the decision and agreement on function (purpose/content) has been reached. After an agreement on function, delivery of content can be selected from among three major curricular approaches (infusion, separate programing, or a combination of infusion and separate programing) and three basic educational environments (regular class, resource room, and self contained special class).

Most professionals in special education are in fairly strong agreement regarding the nature of the major environmental or administrative arrangement options, i.e., regular class, resource center, and special class. While there are strong advocates for one particular alternative, there is increasing recognition of a need to have all three options available for a continuum of services. On the other hand, there is a lack of understanding of the nature of curriculum approaches in career education programing and the division lines are drawn sharply between advocates of infusion versus advocates of separate programing. For this reason this paper will focus on this area of career education delivery.

Infusion vs. Separate Programing

The infusion approach incorporates or

integrates career education concepts and skills into other subject matter content, to make that content more motivating, relevant, clear, or concrete. The primary learning objectives are, and remain, focused on the subject matter content. For example, when an instructional objective in a science class focuses on the concept of toxicity, instructional activities might include learning about poisons found in the home. This presents a science concept in the context of a daily living skill.

The separate programing approach separates career education concepts and skills from other subject matter to the extent that the career education concepts and skills are, and remain, the primary objectives for learning. While basic skill subjects or other subject matter content may be used as activities or means to reach the career education concept or skill objectives, they remain secondary to the primary objectives directed toward student attainment of career education concepts and skills. There are three basic types of separate programing:

1. Total curriculum: Special career education curriculum with total focus on career education concepts and skills.
2. Separate courses: Year long course, e.g., "Career Development"; semester long courses, e.g., "Personal Development"; minicourse, e.g., a six or nine week course on a specific cluster of skills, e.g., "Basic Child Care" or "Handling Your Money."
3. Unit teaching: Five to ten units per year of instruction on career education concept(s) or skill(s), e.g., "Community Helpers," "Manners," "Who Am I?" or "Job Interviews."

Selecting an Approach

The selection of one curriculum approach to implement in a school program should be made with an understanding of some of the distinct advantages and disadvantages of its use. The following paragraphs provide some of these advantages and disadvantages to aid in determining which approach should be used.

Infusion. Some of the possible advantages of infusing career education content into a traditional academic curriculum are that infusion:

1. Makes abstract academic content more concrete, relevant, and consequently, easier to learn.
2. Increases the possiblity for student exposure to a wide range of career education concepts and skills, within the context of what schools are presently best prepared to do.
3. Assures that if infusion is operative in the entire educational program, the content of the curricula in regular classes will be more appropriate for many handicapped children.

Some of the possible disadvantages of the infusion approach in delivering a comprehensive model of career education for the handicapped are that infusion:

1. Tends to take an "activities" approach, which means that career education activities are used to enhance the learning of concepts and skills of basic subject matter. The concepts and skills inherent in the activities related to career education are left to incidental learning.
2. Does not lend itself to evaluation of achievement of the types or levels of learning one would desire for career education concepts or skills, because the evaluation focuses on the subject matter concepts and skills.
3. Does not encourage, or in many cases permit, repetition of career development concepts and skills that are needed by many handicapped children for overlearning.
4. As it is typically used, is not systematic enough to ensure that the

scope and sequence of the desired concepts and skills are covered.
5. Depends upon the willingness and ability of teachers to incorporate the concepts and skills of a comprehensive model into each of the basic academic skill areas. In essence, it is a voluntary commitment unless the school district or building principal requires it, monitors it, and provides support in doing it through inservice training, materials, and resources.

Separate Programing. There are some distinct possible advantages for separate programing of a comprehensive career education model for the handicapped. Among these are some cited by Gibson (1972). Separate programing:

1. Assures that concentrated attention will be given at some time during the year to the goals and objectives for career education for a given level.
2. Communicates to pupils the importance of career development.
3. Makes more of an impact and leads to more effective and efficient learning by being the focus of learning.
4. Offers an opportunity to tie together the various career development concepts and skills that pupils may have been exposed to over a period of time at home, in school, or the community.
5. Serves as a motivating technique for upcoming basic subject matter content and experiences.
6. Increases the undertaking of special activities and the extensive use of community resources.

As persuasive as these advantages for separate programing might be, there are some significant disadvantages. Separate programing:

1. Adds to an already crowded, highly competitive curricular marketplace.
2. As a separate course leads to specialization requiring that it be taught by someone with training in the area. Subject matter programing eventually leads to certification regulations.
3. As a curriculum or subject matter course, is difficult to implement without a well developed, systematic, sequential curriculum guide or published curriculum series. Neither of these exist currently.
4. Requires some standardized achievement assessment instruments to assess the functioning level of students and provide data for effectiveness and instruction. These do not presently exist.
5. Tends toward artificiality; that is, there are certain content areas relating to actual job or daily living skills that logically belong in basic subject matter instruction. Certain aspects of consumer education, for example, should be taught in math and social studies; certain aspects of human sexuality and body care should be taught in science or health; and, obviously, such critical job and daily living skills as reading, writing, spelling, and arithmetic should be taught separately at the elementary level.
6. Could become a type of tokenism that is intended to satisfy the advocates of career education, but effectively keep the academic areas "pure," by avoiding infusion.

The Combined Approach

One does not have to choose either infusion or separate programing. Both can be used in a combined approach. Specifically, the combination of infusion and separate programing is an approach that purposefully uses both infusion and separate courses and/or unit teaching. This requires a high degree of planning, coordination, and cooperation to work effectively. Otherwise, there is likely to be redundancy or gaps in the scope and sequence planned. An example of this approach at the elementary level would be the use of infusion of career education content into reading, arithmetic, language arts, social studies, and science instruction through carefully

selected career education activities and materials to complement the objectives set for these subjects. In addition, there would be planned a systematic presentation of units of instruction (K-6) to focus on specific concepts and skills in career development. This might involve 8 to 10 units per year for each grade level.

An example of the combination approach at the secondary level would be the planned, systematic use of infusion in all subject matter areas (academic, physical education, fine and applied arts, and vocational-technical) through specified types of career education activities and/or materials appropriate for the course objectives. This effort could be combined with planned unit teaching in each of these areas and well planned courses focusing on major career development needs for the changing adolescent from junior high school through high school or even postsecondary school programs. Some advantages of a combinational approach are that it:

1. Permits a balance between teaching critical academic skills (with career education content incorporated for application) and critical career education concepts and skills (with basic skills incorporated as problem solving tools or aids to make certain job or daily living demands go easier).
2. Provides a compromise in the issues of adding to an overcrowded curriculum and poses less of a threat to subject matter specialists.
3. Permits the teacher to be involved in the total education process by retaining responsibility for covering all critical areas, but without having to take on certain instructional goals personally.
4. Provides a unique opportunity to tie together more effectively the concepts and skills learned in both academic and career education instruction.
5. Provides the handicapped pupil in the regular classroom the critical elements necessary for it to be a responsive environment, not a restrictive environment.

Although there are some potential disadvantages to a combination approach, the major disadvantage is that there is no way to control the infusion aspect of it. A school district or building principal can prescribe certain teaching units or courses to be taught separately and these can be monitored rather effectively. Infusion can be urged or encouraged, but there is no really effective way of determining whether it has been done appropriately or at all.

The strength of the arguments in favor of a combination of the infusion and separate programing approaches appears clear. If all handicapped students were alike in terms of degree of functioning level, the selection of the combined approach would be obvious. However, the severity of handicap is as an important consideration in curriculum approaches as it is in considering administrative arrangement options for providing the least restrictive environment. In addition, there may be some desirable differentiations in types of delivery based on grade level. Figures 2 and 3 reflect how these variables relate to one another to yield possible different curriculum approaches.

CONCLUDING REMARKS

Delivering career education content in instructional programs for handicapped students is difficult. Uncertainty regarding purpose and content; complexities of approaches, environments, and administrative arrangements; and variability in severity of handicaps make the task for educators even more difficult. Knowing some alternatives and awareness of what the problems are should be the starting point. That is a concern for <u>function</u>. Once the function of career education for the handicapped is established, then some alternative <u>forms</u>

FIGURE 2. Recommended Approaches to Delivery of Career Education Instruction Based on Grade Level, Degree of Handicap, and Instructional Setting at the Elementary Level

	Mildly Handicapped		Moderately to Severely Handicapped*	
	K-3	4-6	K-3	4-6
Regular Class or Resource Room	Infusion and unit teaching	Infusion, unit teaching, and minicourses	Infusion, unit teaching and separate subjects (semester long)	Infusion, unit teaching and separate subjects (semester and year long)
Special Class	Infusion, unit teaching, and separate subjects (semester long)	Infusion, unit teaching, and separate subjects (semester and year long)	Total Curriculum	Total Curriculum

*Moderately or severely handicapped pupils in regular grades or resource rooms will most likely be visually handicapped, aurally handicapped, and/or learning disabled.

FIGURE 3. Recommended Approaches to Delivery of Career Education Instruction Based on Grade Level, Degree of Handicap, and Instructional Setting at the Secondary Level

	Mildly Handicapped		Moderately to Severely Handicapped*	
	7-9	10-12	7-9	10-12
Regular Class or Resource Room	Infusion, unit teaching, minicourses, and separate subjects (semester long)	Infusion, unit teaching, minicourses, and separate subjects (semester and year long)	Infusion, unit teaching, minicourses, and separate subjects (semester and year long)	Infusion, unit teaching, and separate subjects (semester and year long)
Special Class	Infusion, unit teaching, and separate subjects (semester and year long)	Infusion, unit teaching, minicourses, and separate subjects (semester and year long)	Total curriculum	Total curriculum

*Moderately or severely handicapped pupils in regular grades or resource rooms will most likely be visually handicapped, hearing impaired, and/or learning disabled.

of delivery can be developed.

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CAREER EXPLORATION FOR GIFTED AND TALENTED STUDENTS: AN INVESTMENT IN THE FUTURE

Nancy Tia Brown
Carolynn A. Crusey

What is meant by gifted and talented? Who are the gifted and talented children? How can they be identified? What can be done to develop creative potential? Should special programs for the gifted/talented exist?

These are questions which educators involved in gifted and talented education have pursued for many years. In a report to Congress (Marland, 1972), the Commissioner of Education stated that the gifted child is quite possibly the most neglected of all students with special educational needs. Yet this child may also hold the greatest potential for contribution to society. The same report goes on to state that

> Evidence from school systems in which the gifted can work with specialists of similar interests and explore occupations strongly indicates that career education is of great value in allowing students to assess career options and in motivating them to go to college. The gifted face career problems because of multiple options available to them and choice among possibilities is difficult for many... Proper career education could be of particular significance for those with highly specialized talents. (p. 27)

The problem is evident; many educators and school districts are seeking solutions.

BACKGROUND

We too are seeking solutions in Jefferson County, Colorado. School centered gifted/talented programs have existed in pilot elementary and secondary schools for several years. These programs focus on the development of creative, academic, leadership, and artistic potential in identified students. Career education programs (both in school and community based) have also been developed and implemented in many of our schools. The programs seek to equip students with information, processes, and insights needed for life beyond the classroom and to bring occupational relevance to the educational experiences of students.

In August, 1977, the Career Education and the Gifted/Talented Education Departments in Jefferson County received funding to develop exemplary career exploration programs for gifted and talented secondary students. A Title IV-C state grant was awarded for a model at the junior high level, and funding from the US Office of Education was received for a senior high model. This funding allowed Jefferson County the opportunity to develop programs at both grade levels with a high degree of articulation and coordination between the two.

The basic vehicle for implementation of these programs was Jefferson County's existing Exploring Careers in the Community (ECC) Program. ECC is a community based career education program adapted from a model developed by Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon.

NWREL provided technical assistance in the adaptation of this model for the gifted and talented, which includes student identification and selection procedures, an 18 week curriculum specific to the needs of gifted/talented, student and teacher materials, and an evaluation design. The pilot for the career exploration programs for the gifted and talented was conducted during the spring of 1978 at three junior and three senior high schools in the county. The programs are currently in the second year of operation.

In future years, the program is intended to provide a gifted/talented element for existing career exploration programs and a career exploration component for existing gifted/talented programs. The materials and processes incorporate essential elements of both dimensions into a program that can be used by many schools and benefit students beyond the funded years.

The following discussion contains highlights of project components, and is intended to provide an overview of the Career Exploration Program for Gifted/Talented Students in Jefferson County.

IDENTIFICATION

It is the recommendation of both the Career Education and the Gifted and Talented Departments that the following definition of giftedness be used as a basis for the Jefferson County Student Identification and Selection Model:

> Giftedness consists of an interaction among three basic clusters of human traits--these clusters being above average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs. (Renzulli, 1978, p. 261)

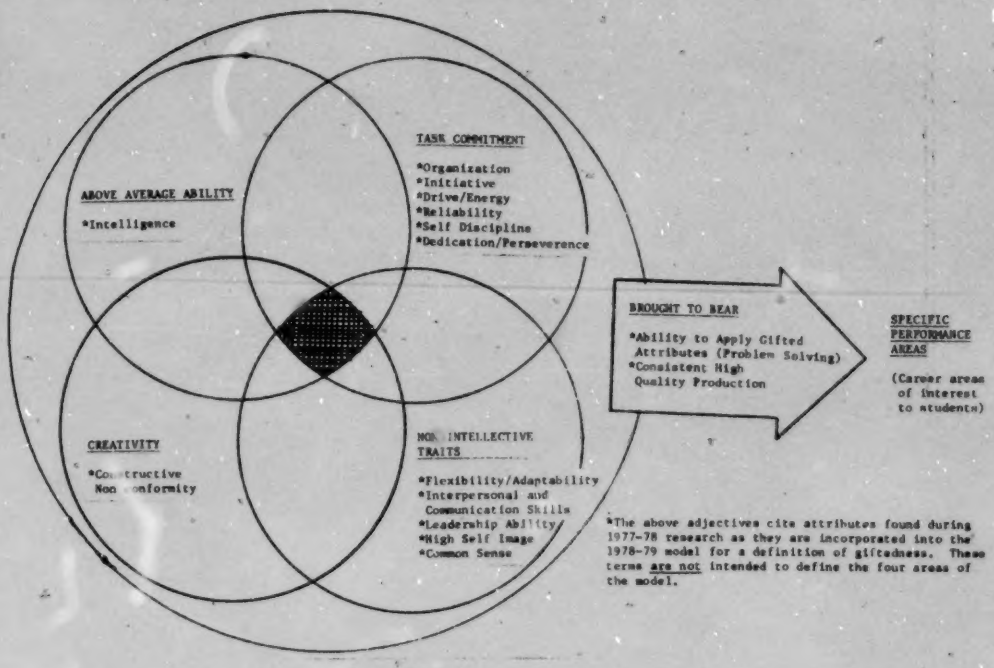
In addition to the three clusters described, it is recommended that a fourth category entitled, "Nonintellective Traits," be added to this construct in such a way as to include the three clusters described and highlight the fourth, equally important, dimension to be measured during the selection process. This dimension has been added in order to include those personal and social attributes seen as necessary for exceptional achievement in the world beyond the classroom.

It is intended that this identification model yield a population of gifted students from which future leaders and producers in careers will emerge. It is not expected that every student selected will be considered gifted as an adult, but under the Jefferson County definition the chances of excluding students with potential will be minimized.

Figure 1 illustrates this model and highlights the manner in which the original attributes (developed and used during the 1977-78 school year) were incorporated for use during the 1978-79 school year. The result is a model for use in Jefferson County that uses Renzulli's three ring conception of giftedness, adds the dimension of nonintellective traits, and recognizes the 1977-78 criteria in a more manageable manner.

Definitions of the four components will be determined by the instruments chosen to measure potential in each. While the majority of measurements are now standard for all Jefferson County gifted programs, the use of specific

FIGURE 1. ECC/GT Attributes and the Adapted Renzulli Identification Model



Renzulli/Hartman rating scales (with adaptations) aid in identifying students with specific aptitudes most appropriate for specific programs.

Measurement

Through measurements the four areas of above average ability, creativity, task commitment, and nonintellective traits will be equally assessed. In keeping with the research done by Renzulli, students selected for the program will be those who possess qualities that reveal an interaction of the components. A screening committee comprised of staff, administrators, and community instructors is involved in the administering of screening instruments and selection of students who will receive maximum benefit from the program.

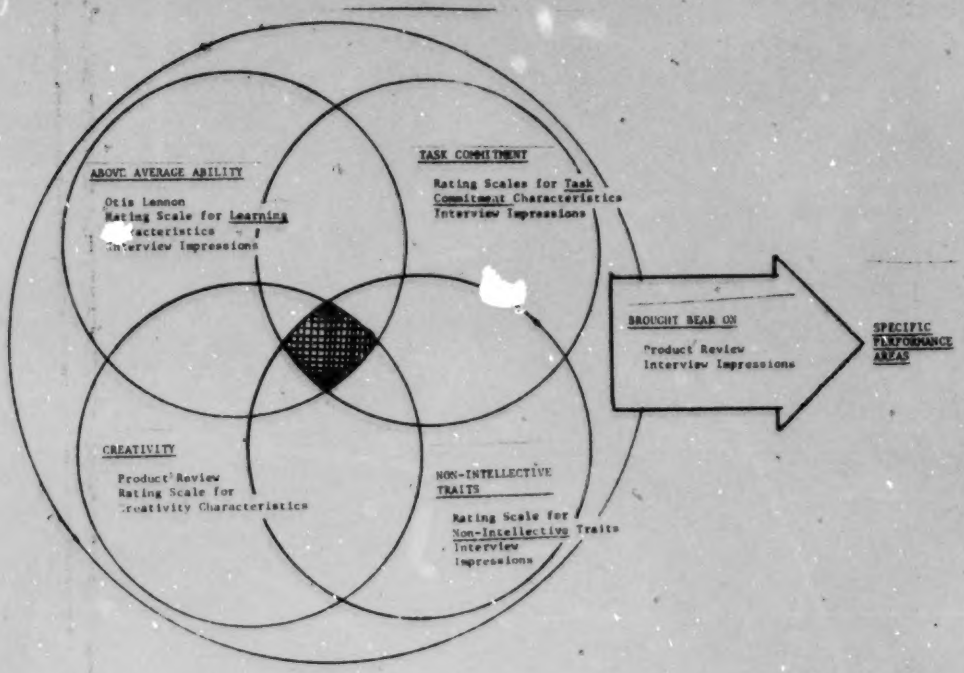
Figure 2 illustrates how the instruments are combined to measure gifted attributes included in the program's guiding definition of giftedness.

THE PROGRAM

The ECC/GT program model is based on the NWREL Experience-Based Career Education (EBCE) model, modified for use in Jefferson County as ECC and then further adapted to meet the needs of gifted/talented students.

The ECC/GT program uses the community as a major resource and stresses individualized, independent learning with the guidance of school staff and community persons. At the junior high level, students are encouraged but not required to work in small groups. At the senior high level, students generally work independently. Incorporated into the program is an emphasis on the development of higher level thinking skills and creative production. Selected students are enrolled in the program for 18 weeks for half day blocks of time. They spend part of their time in the learning center/classroom and part in the community. As a result of their ECC/GT experience,

FIGURE 2. Measurement for Gifted Attributes: 1978-1979 Identification Model



students are awarded elective career education credit and academic credit in selected content areas as well. This is done through a negotiation process with students, learning managers (ECC/GT teachers) and/or subject area teachers. This negotiation results in the development of individualized projects to meet content area objectives and requirements through the use of ECC/GT learning strategies.

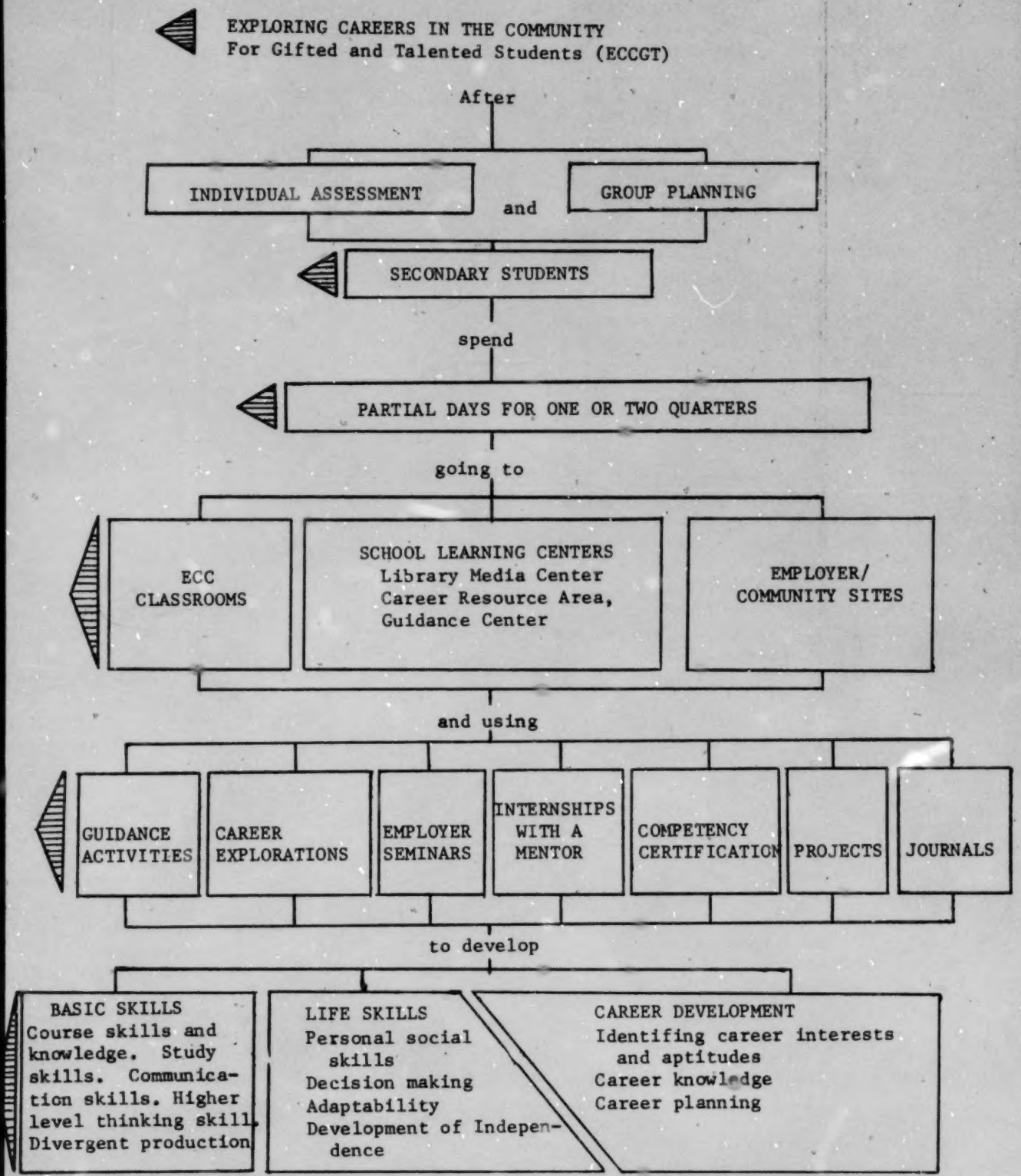
Figure 3 is a visual representation of the program components and learning cycle.

Learning Strategies

Learning Strategies (How?) refer to the activities ECC/GT students use as a basis for learning. The following is a synopsis of the seven learning strategies of ECC/GT program:

1. Guidance. This involves both group and individual guidance focusing on group building skills, acceptance of "gifted and talentedness," decision making, values clarification, and career awareness.
2. Employer Seminars. Community persons are invited into the classroom to discuss career related issues with students in a seminar format.
3. Exploration. Students are placed in the community for 3 to 5 day experiences in a career field. Students do career research prior to on site visits; observe, interview and experience hands on activities while on site; and complete a career analysis following the site visitation. This is primarily a small group endeavor at the junior high, and an individual one at the senior high level.
4. Journals. This strategy serves to provide an uninhibited communication tool between student and teacher. It is a written log of feelings, experiences, and thoughts of the students which is shared

FIGURE 3. ECC/GT Learning Path



with and responded to by the teacher.

5. Competencies. These are program survival skills that every student must master. Competencies include use of public transportation, interviewing skills, telephone skills, and use of audiovisual equipment. Competency in each area is certified by a community person or school staff.
6. Internship. This strategy is the highlight of the program. Students spend 3 to 5 weeks working with a community instructor (mentor). Students may work individually or in small groups and are expected to use creative problem solving processes to produce a creative, career related product as a result of the experience. An exploration at a site is a prerequisite to an internship.
7. Project. These are individualized plans for learning and are prepared for individuals or small groups of students. They outline the activities necessary for earning course credit and completing the internship. Students, teachers, and community instructors are involved in the development and evaluation of these learning plans, activities, and products.

The ECC/GT program is process as well as content oriented. The development and application of higher level thinking skills and creative/divergent problem solving skills are emphasized. These processes are practiced and applied through all of the learning strategies. The development of independence, responsibility, and time management is fostered throughout the program.

Learning Outcomes

The "Why?" statements are the expected learning outcomes that result from participation in the ECC/GT program. Teachers, administrators, and concerned community people assisted in designing the ECC/GT program. There are three main components in the curriculum. They are basic skills, life skills, and career development. Following are the goals for learning in all three areas:

Basic Skills. Basic skills are skills used to perform tasks, solve problems, and learn new ideas. These skills will be applied in practical and real situations, as well as in school. The following are the basic skills goals for students in the ECC/GT program:

1. Course Skills and Knowledge. Through analysis of course objectives and cooperative planning with the learning manager, students will negotiate projects and other activities to justify subject area credit(s) other than ECC to be received through the ECC/GT program.
2. Communication Skills. Students will be able to communicate effectively in oral, written, and interpersonal forms. Students will also exhibit knowledge of various organizational communication structures and networks.
3. Study Skills. Students will improve study skills for use within and outside the school setting.
4. Thinking Skills. Students will distinguish the types of thinking skills that are appropriate in a given situation and apply them. Emphasis will be on the higher level thinking skills (analysis, synthesis, evaluation).
5. Divergent Production. Students will identify, investigate, and provide solutions to career related problems using community instructors as resources. Through the application of the decision making process, students will (a) generate several creative, alternative solutions; (b) select one alternative solution and follow through with a product which is original to the student and acceptable to the career field; and (c) evaluate the chosen solution

and results of product regarding its effectiveness in solving the career related problem.

Life Skills. Life skills are really processes, not products. They apply to every aspect of life. They are skills people need to bring together and enrich their roles as citizens, family members, and workers. They help one find meaning in and enjoy satisfaction from the role of growing, changing individuals and as contributing members of society. The life skills goals are:

1. Personal Values. Students will demonstrate an awareness of their personal values (i.e., personal strengths, weaknesses, goals, likes, dislikes) and the implications of those values on career planning and opportunities.
2. Decision Making. Students will exhibit a knowledge of personal decision making techniques and processes.
3. Adaptability. Students will exhibit an increased capacity to adapt to new situations.
4. Development of Independence. Students will demonstrate an increase in independence (initiative, resourcefulness, time management) and in assuming responsibility for carrying out and evaluating learning.

Career Development. As with life skills, career development skills are processes, not products. ECC/GT does not provide jobs but gives students a better understanding of how to learn about careers, how to find and keep jobs, how to classify and relate occupations, and what to expect in and from the world of work. Students learn how to personally relate to careers, obtain lifelong, reusable skills by developing a foundation for seeking initial jobs and for making subsequent career changes. Following are the student learning goals for the career development component of the program:

1. Identifying Career Interests and Aptitudes. Students will identify personal interests and aptitudes.
2. Career Knowledge. Students will increase their knowledge of occupational opportunities.
3. Career Planning. Students will increase their knowledge of requirements for entering and progressing through a career field. Students will apply their knowledge of personal interests/aptitudes, decision making processes, occupational expectations (life style, etc.) and set career related goals and plans based upon this information.

PLANNING

Planning, organization, and management are crucial in order to maximize the benefits of the ECC/GT program for students and to best use learning manager and community instructor time and effort. Major considerations for program planning in the ECC/GT project include:

- Student recruitment and selection. This occurs far enough ahead of program implementation to allow time for scheduling arrangements and proper notification of parents and students.

- Staff selection and training. Staff are selected based upon background and experience in Career Education and Gifted Education, management ability, interpersonal skills, interest, and willingness to support the ECC/GT effort. It is recommended that ECC/GT staff be certified teachers in the subject areas being offered for academic credit through the program. Staff training revolves around concepts and issues in Career Education and Gifted Education. In Jefferson County a five day staff training module has been developed around the ECC/GT model and is supplemented

by training workshops in gifted education in the areas of identification and selection, psychological and counseling needs, and curriculum design.

- Administrative details. While each building administrator deals with these issues based on individual needs and constraints, the general guidelines are as follows:

  Scheduling. Students are block scheduled into this program for approximately one half day.
  Transportation. Students use public transportation or school buses from Jefferson County. In some cases, parent volunteers help as well.
  Credit. Students are awarded 1 to 2 subject area credits in addition to elective career education credit. The subjects are usually language arts and others at school discretion.
  Insurance. County insurance procedures apply.
  Physical facility. Classrooms and equipment are provided by each school.

- General program planning. General curriculum guidelines, necessary student and teacher materials, program requirements, timelines, and behavior expectations have been designed. Many activities and procedures continue to evolve as students actually participate in the program. A learning manager's guide, student handbook, and student materials for the program now exist in Jefferson County.

- Use of community resources. In a program such as ECC/GT which relies heavily on the community as a learning resource for students, the organization of these resources is vital. The major considerations for the use of community resources include 1) site recruitment, 2) site maintenance, 3) community instructor orientation/training, and 4) continued communication with community instructors and sites. In Jefferson County initial site recruitment has been the function of an administrative staff person - the Community Resource Specialist. This was done to build a site "bank". At this point, however, the responsibility for site recruitment and maintenance has been shifted primarily to individual schools. Each school has an assigned number of sites which the staff is responsible for maintaining. Each school also has continued the recruitment effort with sites to work primarily with that school.

  A community instructor orientation training plan is currently under development. Several tactics are being used: formalized sessions, informal telephoning, written memorandums, etc. A followup questionnaire is sent to all community instructors for evaluation purposes. Communication with community instructors is ongoing through written forms, telephoning, and personal appointments to develop and evaluate internship projects with students.

CONCLUSION

This is the essence of the Career Exploration for Gifted/Talented secondary students program in Jefferson County, Colorado. The staff, administration, community persons, parents, and students committed to this program believe in the potential of the gifted/talented child and the value of career education. It is a continuing program, constantly seeking to revise and improve--it is an investment in the future.

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NOTE: The identification model presented in this paper reflects procedures which were used during the 1978-79 school year. Based on evaluation results and experience this model has been revised and refined for use during the 1979-80 school year.

The student outcomes and curriculum design presented in this paper, reflect program development as it existed for the 1978-79 school year. Based on evaluation results and experience, the student outcomes and curriculum model have been revised and refined for use during the 1979-80 school year.

CAREER EDUCATION FOR SEVERELY PHYSICALLY DISABLED STUDENTS: THE KEY TO THE FUTURE

James S. Cohen

Before outlining the major foci of the career education program at the Human Resources Center, I would like to present some statistics mentioned in the Gallup Poll on Education reported in September 1978. Of the adults polled, 79% believed that career education is very important and that high school students should have saleable skills before graduation. In addition, they felt that it is important for students to know how to write job applications. When asked what public schools should be doing that they are not doing now, those polled answered that there should be more emphasis on careers. Academics (English and mathematics) were still a high priority, but commercial courses such as typing and bookkeeping rated very high. Poll responses also indicated that vocational education should not be separate from academic education. When asked if college is important, 36% said that it is very important, 49% said that it is important, and remarkably, 16% said that it is not too important.

The continuing need for career education and work preparation is apparent to those in education as well as to those in the business world. The need for career education with severely physically disabled students is more than a concern; it is a matter of urgency. It may mean the difference between a life of economic self sufficiency or a life of economic dependence. According to experts in the labor/economic forecasting field, many of the future jobs of today's school aged students have not yet been invented. Further, the current labor market indicates, through its currently high unemployment rate, that there is a critical demand for various new occupations, such as computer technician, biological engineer, and health technicians.

The career education program at the Human Resources Center responds to these issues and is based on solid research, grounded in sociology, psychology, anthropology, vocational education, and other related fields of study.

MAJOR GOALS OF THE PROGRAM

Through the Bureau of Education for the Handicapped (BEH), the Human Resources Center has been awarded a 5 year grant to develop a model comprehensive career education program for national dissemination. The program has four major goals:

1. To determine the career education needs of severely physically disabled children in prekindergarten through 12th grade.
2. To select a battery of assessment tools to monitor and to determine the career development status and needs of severely physically disabled children from prekindergarten to 12th grade.
3. To design and develop a comprehensive

career education model for severely physically disabled children from prekindergarten through 12th grade.

4. To test, validate, and disseminate a career education curriculum and program guidelines.

We adopted the official United States Office of Education, Office of Career Education definition of career education in our program, i.e., career education is the totality of experiences through which one learns about and prepares to engage in work as part of his or her way of living. We look at career education as an equilateral triangle with each side representing a major component in our program's philosophy. We have named the first side of the triangle Self, which is concerned with realistic information such as the aptitudes, interests, talents, and values that help each of us recognize who we are. The second side is labeled World of Work, which includes the sight, touch, and taste of the working world. The base of the triangle, upon which the system and much of all life rests, is labeled Ability To Make Decisions. In career education everyone learns the important decision making skills that can help to alleviate anxieties, improve choices, and reduce the unpleasantries that result from false starts.

The major purpose of our program is to guide students from where they are to where they would like to go through realistic self appraisal, assessments, experiences and performance evaluation. We also believe that career education is for all learners; exists in all levels of education; includes all work, both paid and unpaid; includes the total community; and is lifetime education. We have kept this philosophy as an integral part of programing.

RESEARCH PROGRAM

The career education program at Human Resources Center is a research program. The results of this research are implemented with students in the school. We seek relationships between independent and dependent variables and the effects that these relationships have on the student's academic, vocational, or technical futures.

The independent variables we have identified include age, sex, whether or not the student is in a wheelchair, the number of years the student is in the program, whether the student has a terminal illness, and whether the student is incontinent.

The dependent variables we have identified include self concept, career interests, familiarity, and knowledge; and reading and math scores.

Our comprehensive career education model for students with physical disabilities, combines career development with career preparation experiences so that our students will have the skills to meet the future. Under the realm of career development, such areas as self awareness, decision making for independent living, career awareness, career planning, and job placement are addressed. Under the realm of career preparation, the choices available to our students include academic, vocational, or technical education. However, all students follow an academic educational program. Specific foci are developed for students which include vocational, technical, or other types of extended educational programing. Our purpose is to direct both career development skills and career preparation to adequate job entry.

COMPONENTS OF THE CAREER EDUCATION PROGRAM

The career education program at Human Resources Center contains a wide scope of educational experiences that provice opportunities for physically disabled students who would otherwise get little exposure to these concepts. Our program is comprehensive in scope, sequential in nature, and concentrated on the physically disabled student's academic experiences. The program contains major components which create wide opportunity for linking classroom lessons with the world of

work. The development of program components has been designed to present numerous learning modalities to the student through sound educational programing. We feel that by combining and making available numerous career education components, students will be able to choose the components compatible with their learning styles. The following sections explore the 15 major components of our career education program.

Review of the Literature

An exhaustive literature search was conducted for the career education program with special attention focused on local and national model programs which include physically disabled students. This search and the related research that results from it formed the conceptual framework from which our program evolved. There is overall emphasis on providing many varied experiences. We have purposefully included an extensive array of components into the career education program that give student exposures in various education dimensions to facilitate learning.

In addition to this intensive literature search and the documentation of available career education materials, we formulated goals, established our program components, and developed teaching strategies to implement what we feel is a national career education model program.

Development of Assessment Appraisals

These assessment appraisals were developed to measure student, parent, teacher, and potential employers' concerns and needs. Once these appraisals were completed and collected by the various groups, the information obtained was used to develop curriculum goals and plan the program.

Staff Training

Staff training is vitally important to any new program that incorporates a concept or ideas of change. After selecting staff on a voluntary basis, we conducted inservice training sessions for 2 weeks during the summer. At these staff training sessions and inservice workshops, teachers were instructed in the conceptual framework for career education, implementation strategies, as well as the development of objectives for later curriculum development. Regular monthly meetings, as well as meetings dealing with staff needs, are held throughout the year.

Many adaptations were made to develop a classroom curriculum. The inservice training for school staff incorporated techniques designed to develop a curriculum that relates to special student needs. Thus, the curriculum reflects these needs and contains lessons dealing with problems of gaining access to buildings, getting to and from the job, feelings of nondisabled persons toward disabled persons, and other important topics. A major curriculum component concerns student decision making and its relationships to independent living

Curriculum Development

Six major goals were established:

1. To develop a healthy, positive self-image.
2. To understand the role of "self" in a nondisabled society.
3. To understand the decision making process.
4. To appreciate the relationships between the decision making and independent living.
5. To develop an understanding of the concept of Career Clusters and to recognize some of the skills and abilities needed in each of these Career Clusters.
6. To understand the significance of career skills and career habits.

Twenty-one objectives were formulated dealing with each of the six goals.

Next, we developed a lesson format that we believe is unique because of its simple layout and the ease with

which it is administered and implemented. A specific academic area is designated on the lesson format. The lesson format also includes a goal statement or purpose, student objectives, and materials needed for the implementation of the activity. A direction section is also included. Another interesting component of this lesson format relates to evaluation. In a space at the bottom of the lesson, students are encouraged to indicate whether or not they thought the activity was excellent, good, fair, or poor.

At present, over 250 curriculum lessons have been developed. Each lesson is incorporated into a subject area and contains one of the 21 objectives developed for use in the program. Teachers implement lessons on a regular weekly basis.

Evaluation is a major component of curriculum development and implementation in the classroom. Five major areas have been identified for evaluation. In the area of self concept, the Piers-Harris (How I Feel About Myself) Scale is used. In the area of career interest and familiarity, the Comprehensive Career Assessment Scale is used. In the area of career knowledge, Science Research Associates Scales 1 and 2 are used. In the area of reading and math skills, the Stanford Diagnostic Scale, reading, comprehension, and mathematics sections are used.

Local Steering Committee

The committee is composed of parents, educators, alumni, and members of the business community interested in education for physically disabled students. They are specifically interested in the career education and eventual job entry of these students. Regular committee meetings are held so that program progress and related input are discussed, so that programing continues to be relevant to and meaningful for both the business and educational community.

Speakers' Bureau

Currently, 28 speakers from businesses, agencies, educational institutes, and private employment speak to the students per semester. These speakers present students with strategies, insights, and their feelings concerning career planning. Simultaneously, these speakers are able to discuss work skills, career interests, and educational requirements for the work they do, as well as to see the students as potential employees. An important component of the Speakers' Bureau is the evaluation appraisal. This appraisal is given to the students at the completion of each semester's speakers and generates data for use in keeping programing timely, interesting, and educational.

National Career Education Advisory Council

Our council members include Sidney P. Marland, father of Career Education and President Emeritus of the College Board Testing Service; Dr. Gene Bottoms, Director of American Vocational Association; Dr. Norman Gysbers, President Elect, American Personnel and Guidance Association; Dr. Harold Munson, Professor, University of Rochester; Dr. Joel Magisos, Assistant Director, Ohio Center for Technical and Vocational Education; Dr. Saul Dulberg, Director of Career Education, State of Connecticut; Dr. Robert Hoppock, Professor Emeritus, New York University; and Dr. Seymore Wolfbein, Dean, The School of Business, Temple University.

The selection of these members focused on people who have made contributions to their respective fields and who are aware of physically disabled persons as a population requiring immediate national attention. On January 16, 1979, this nationally recognized group of educators met at the Human Resources Center. At this meeting, we were given a directive to develop our program so that we might spearhead the movement in career education for physically disabled students.

Classrooom Business Ventures

Classroom Business Ventures foster the first real work experience for students at our center. Specifically, Classroom

Business Ventures responds and is adapted toward meeting five special needs of physically disabled students:

1. Creating more opportunity for socialization, mobility, and contact with other students.
2. Weaning students from parental overprotectiveness, as well as focusing student effort toward business related involvement.
3. Confronting physically disabled students with the implications of their particular disabilities in the work environment.
4. Having employers see physically disabled students involved at working in business related activities.
5. Teaching teachers to establish work related programs with the students that link classroom activity to the world of work.

Since most of our students have had no work experience and since Classroom Business Ventures simulate work experience, student interaction and participation in the planning, operation, and profit making of a business meets student needs. To date, the following businesses have been developed: Green Thumb, Inc., a plant and related product business; Wood Work, Inc., a business venture in which students make and sell wooden tables; Recycling, Inc., in which students collect, deliver, and reclaim newspapers used throughout the Human Resources Center; The Cookie Company in which young students make, bake, and sell cookies and cakes in order to buy a classroom guinea pig; Shoeshine, Inc., in which students pick up and contract for the shining of employees' shoes, using profits to buy materials for project continuation as well as for needed classroom materials.

Future plans for Classroom Business Ventures include a radio station, a school store, and a bank. An integral part of the Classroom Business Venture is the appraisal developed to assess major components of the venture. Planning is appraised before the Classroom Business Venture begins, as well as when changes are needed for future business ventures.

Student Field Trips

In this phase, students contact the sites they wish to visit which relate to classroom activities and student interests. They schedule the trip to the work site and prepare for the visit by researching and discussing the types of occupations and functions they will see.

The arrangements for site visits often require adaptations not commonly required with nondisabled populations. Specifically, field trip sites must be accessible to physically disabled students as well as provide a valuable learning experience. It is common for the student representatives to call the anticipated work site employer and discuss the accessibility of their facilities to people in wheelchairs. These procedures provide additional valuable learning experiences. A major component of student field trips is the evaluation appraisal, which the students fill out upon completion of the field trip.

Work Experience Program

This component provides paid work experience for students at selected job sites within the Human Resources Center. In some cases, work site modifications have been made for students, such as a calculator adaptation or self paced photography sessions. In addition, the student's supervisor is instructed in how to provide adapted work skill information to the student worker and how to work with students to insure adequate job performance. Supervisory instruction is as important as the actual student implementation on the job. A thorough evaluation has been developed for students in the work experience project. The work experience coordinator further expands our programing in this area to include thorough prevocational evaluation and related curriculum development in the area of occupational survival skills.

Developed Classroom Media

The development of classroom media products for use in the career education program has a direct focus on the special

needs of physically disabled students. Thirteen slide cassette presentations have been developed that discuss job requirements, training, necessary education, confronting workers on the job with questions dealing with physically disabled people, as well as the performance of work tasks. Programs have been developed that deal with the importance of mobility to and from the work sites, as well as the range of responsibilities a disabled worker needs to perform the job.

In addition, students presently in the work experience project are developing a slide/cassette module. The slides will be part of a teacher training strategy presentation dealing with the conceptual framework of career education as well as with the implementation of career education at the Human Resources Center.

A videotaped strategy film has also been developed and is used with teachers in the program. This presentation shows the Director of Career Education implementing career education activities with the students. The film presents a "how to" look at career education, so that teachers may establish a comfort level, through modeling, for later implementation in their classrooms.

Computer Assisted Project

Through this project, students have access to lessons involving mixed media and alpha numerics which enable them to interact with the computer on lessons involving job search, work values, work simulation, using and reading the want ads, etc. Our students are fortunate in that most of them have access to computers in their classroom as well as in the central terminal location. Therefore, this expansion of computer programs allows the students to broaden their employment potential through "hands on" activities with the computer in abstract and concrete lessons.

Career Education Proposal Development

There is a constant need to relate our program goals to proposal requests and regulations issued from federal agencies. We are continually seeking funding to expand our programing, and proposal writing, which facilitates growth in component areas, is an integral part of the Career Education Program.

Presentations and Conference Attendance

Another important component is the staff initiated presentations and conferences. Presentations at career education conferences and attendance at other national meetings provide new foci for our staff as we become part of what is happening nationally in career education. Staff members have presented talks to teachers, administrators, and special education personnel as well as presented career education programing strategies to the great numbers of people visiting the Human Resources Center.

Product Development

We are charged, through our grant from BEH, with developing a comprehensive career education model for national dissemination. Therefore, major products with this in mind are being developed. We are developing a monograph series in career education for students with physical disabilities. Topics include a counselor's view of counseling physically disabled students in career education and media developed in career education for physically disabled students. In addition to the 12 monographs, a teacher developed curriculum and a related bibliography on career education with special populations will be distributed as individual products. A career education model slide cassette will also be developed for national dissemination. In addition, some journal articles have been written and others will be written outlining specific components of our career education program. We are in the process of developing a parent survey entitled, "Parents of Disabled Students Respond to the Career Education of Their Children." This survey of approximately 100 parents who send their children to the Human Resources School will be available sometime in the early fall.

We also anticipate the publication of a book developed by our National Advisory Council entitled, Perspectives in Career Education: Focus on the Severely Physically Disabled Student. We also have developed a student file record.

CONCLUSION

I feel it appropriate to summarize our model career education program at the Human Resources Center with the evaluation components which are unique to our program. Research indicates that of the hundreds of career education programs, only 27 have evaluation strategies. Our program at the Human Resources Center will develop evaluation strategies that encompass all the major areas contained in career education programing as outlined by experts in the field. We have developed evaluation appraisals dealing with curriculum, field trips, the Speakers' Bureau, Classroom Business Ventures, and work experience. We include in the needs assessment surveys, the populations we feel are important for research purposes: students, parents, teachers, and business people. We use standardized tests as well as program specific, developed instruments appropriate for our student population.

Other adaptations are used in our program which make it unique in terms of national career education programing. Since the Human Resources Center is a multifaceted operation, which includes the Human Resources School, Abilities, Inc., and the Research Institute, there are unique opportunities made possible which help in programing for career education. Some examples include the use of speakers from Abilities, Inc. and the use of work experience locations from within the center.

Every major career education component of our program is adapted to some degree for physically disabled students. This is done to meet our students' special needs as well as to take advantage of our center's unique resources. However, the adaptations we have made at the Human Resources Center in terms of our career education program better integrate, infuse, and provide workable solutions for programing in career education.

The adaptability of our entire program to more general curriculums, which would include populations of students who do not require special modification, is promoted by the numerous options and quality design our program provides. We feel that career education programing wherever it is used, will be enhanced by the numerous specific adaptations the program at the Human Resources Center includes. Many components, such as the teacher developed curriculum, Classroom Business Ventures, Computer Assisted Career Education instruction, and the developed media productions are entirely original, while other, more traditional career education inputs are enhanced by the modifications made at the Human Resources Center for physically disabled students.

CAREER EDUCATION CO-OP FOR ELEMENTARY AGED HEARING IMPAIRED CHILDREN

Janice E. Richardson
Delia Neuman
Virginia Johnson

There is increasing pressure on school personnel to consider alternative methods for providing support material in the area of career education. This paper examines one option for providing such material to elementary aged exceptional children through the establishment of an interagency cooperative network, in this instance Kendall Demonstration Elementary School and the National Center for Research in Vocational Education at Ohio State University. This paper focuses on the need to infuse career education materials into ongoing instructional activities in the classroom.

PROJECT HISTORY

Collaboration is the best word to describe the joint career education project between the National Center for Research in Vocational Education at Ohio State University and the Kendall Demonstration Elementary School (KDES) at Gallaudet College in Washington, D.C. Now in the fourth year of a proposed five year effort, the National Center and KDES have worked collaboratively to infuse a variety of career education concepts and materials into the school.

Under legislative mandate, KDES operates to provide high quality education for hearing impaired children in the metropolitan Washington, D.C. area and to develop, test, and evaluate educational materials, methods, and programs for use in other schools for the hearing impaired. KDES serves children from the onset of deafness to age 15.

Funded by grants both from the Pre-College Program division of Gallaudet College and directly from KDES, the career education project has involved a variety of strategies designed to develop a comprehensive career education program for KDES that could some day serve the needs of other elementary schools for the deaf as well.

These strategies have focused on process as well as product, so that one of the chief outcomes of the project has been the development of a systematic method of collaboration that ensures that all project endeavors are grounded in expertise in the education of the hearing impaired as well as in expertise in career education theory and practice. This collaborative process involves a number of steps through which both agencies have the opportunity to share the responsibility for the creation and critical review of project activities and products.

The products represent an assortment of approaches to the infusion of career education into an ongoing school program: planning documents, staff development materials, collection of information, and curriculum materials.

During the first year of the project (1975-76), KDES and the National

Center worked together to create an orientation to career education for KDES staff and to conduct a needs assessment relating to career education at KDES.

Based on these initial efforts, two conceptual documents were developed during the second year: A Model for the Total Kendall Demonstration Elementary School Career Education Program and a Scope and Sequence for Career Education at the Kendall Demonstration Elementary School. The Model describes the steps that will lead to the implementation of a comprehensive career education program at KDES and, ultimately, at other schools for the deaf. The Scope and Sequence is a collection of career education goals selected and organized specifically for KDES students.

Additionally, the project has developed a sequence of four curriculum units. These units: Feelings: Keys to Values; Decisions! Decisions!; Coping with Conflicts; and Shooting for Goals comprise a series of instructional packages designed to address the basic career education needs of KDES.

Currently, the project is modifying a career education and language arts program originally developed for hearing elementary age children. Additionally, the modification of a simulation package for middle school age children is in the process.

As the project continues, it is anticipated that more and more staff will become involved in the planning of the career education program and in the development, testing, and use of the career education materials produced through the project. Thus, by the end of the 5 year period, the career education program will have been infused throughout the school.

KDES PERSPECTIVE

Several mechanisms are employed to insure Kendall faculty/staff involvement in the career education efforts. Two of these are the Career Education Task Force and the design teams connected with each of the unit development efforts.

The Career Education Task Force is a representative group of teachers and specialists. Composition of the group varies depending on the scope of the work and the nature of the project under development. The focus of this year's work is on the revision of the working documents, adaption of career exploration simulations, and initial unit adaption of the Career Awareness in Language Arts program. The task force is composed of representatives from each of the instructional departments and specialists in the areas of language, reading, sign language, and research.

The Career Education Task Force is chaired by the Coordinator of Career Education. Responsibilities of this group include policy review and formation, staff development, goal setting, and overall project management.

Examples of the work undertaken by the task force during this contract year include staff development efforts, work on the revision of the Scope and Sequence and the Model for Career Education, a materials analysis to be used with the Materials Resource Guide, and policy decisions for the present contract year. Additionally, based on input from the Scope and Sequence, the Model for Career Education, and the instructional staff, the task force makes recommendations regarding work to be completed in the next contract year.

The design groups are formed at the initial planning stage of each new project. Initially, a determination is made regarding instructional level placement of the project under consideration. Based on this determination, a design group of three or four teachers is designated to work with the instructional designer from the National Center for Research in Vocational Education and specialists in other areas of the school on unit design.

Initially, the group functions in the identification of objectives based on the working documents. A brainstorming session follows which allows the teachers to input activities and strategies related to the topic under discussion.

The design group plays the role of reactor in relation to the unit plan and all draft materials. Based on their input, the plan and materials are revised prior to an inhouse pilot test.

Each of the design team teachers serves as a pilot test teacher. Evaluation strategies are designed and the pilot test teachers receive inservice training on both the evaluation process and the teaching of the unit. Upon completion of the pilot test, a debriefing session is scheduled for the purpose of discussion of the unit design based on student and teacher experience related to the unit.

OHIO STATE UNIVERSITY PERSPECTIVE

The KDES Career Education Project is 1 of approximately 90 projects currently underway at the National Center for Research in Vocational Education, a research and development organization which is a component of Ohio State University. The KDES project is housed in the Special Projects Division of the National Center and is staffed by four professional project staff: a project director, a project coordinator/instructional designer, and an evaluation specialist. Two graphic designers work on a freelance basis to design and illustrate student materials developed through the project.

The National Center has varying kinds of responsibility for products resulting from the project. This year, for example, the staff is consulting with KDES on the revision of the three program documents mentioned earlier and will edit, type, and print those revised documents as well. In addition, National Center staff have primary responsibility for the design and production of the KDES curriculum products.

Based on the initial input from KDES, the National Center instructional designer begins to work on the plan for unit development. The overall product objectives, or goals, identified by the design team are organized into a logical sequence. Enabling objectives are then derived from those general goal statements and are organized into a learning hierarchy. The activities suggested by the design team, as well as additional activities developed by the National Center, are then organized into a sequence designed to aid students in the attainment of the enabling objectives and, ultimately, the achievement of the general product goals.

An important criterion is practicality. Each activity under consideration for inclusion in the unit is subject to many questions related to the general question, "Will it work?" Some examples include: "Is it sufficiently concrete?" "Sufficiently visual?" "Sufficiently tactile?" "Does it take into account the actualities of the classroom situation?" "Does it ask too much of the students -- or of the teachers?" "Will a less complex approach serve the same purpose?"

Variety is an important criterion in the sequencing of activities. In order to both enhance student motivation and to maximize the learning of a group of students with a wide range of abilities and learning modalities, the instructional designer tries to build into each unit a variety of learning strategies. In addition, the designer tries to arrange the sequence of these strategies to provide frequent shifts. A board game, for example, might be followed by a discussion and a workbook exercise.

Another criterion in the organization of the unit's activities is the specification of performance objective activities. These must be incorporated into the unit at precise

points in the instructional sequence to measure students' progress toward both the enabling objectives and the general goals. The performance objective activities must occur after students have had a sufficient amount of practice activities and before students have need to apply the concept in the unit. In addition to being valid measures of student achievement, the performance objective activities must meet the other criteria of logic, practicality, and variety.

Finally, the goals, enabling objectives, practice activities, and performance objective activities are written into a comprehensive unit plan, which is then sent to KDES for design team review.

Meanwhile, at the National Center, the evaluation specialist begins to design student instruments that reflect the goals and activities of the plan and teacher and observer instruments that tap such information as ease of use of the materials, appropriateness, and motivational appeal of the activities.

Based on KDES reaction to the unit plan, the National Center begins work on a first draft of the curriculum materials. At this point, a graphic designer works closely with the instructional designer both to determine the optimum method of graphically presenting the activities that are essentially visual and to suggest more viable approaches to the activities that would be more effective if they had a visual component. The instructional designer and graphic designer also work with the evaluation specialist in the design of evaluation materials that measure students' understanding of concepts rather than their reading and language abilities.

The first draft consists of the text to be included in the Teacher's Guide and illustrations of all the student materials that will accompany the Guide. After the KDES design team reviews this draft and suggests any modifications that might be necessary, the National Center then proceeds with final development, production, and delivery of the pilot test version of the unit. The unit that is produced via this process is a self contained, easily transportable package that includes everything the teacher will need to teach the unit with the exception of basic media equipment.

The degree of involvement of KDES faculty in the design of the process insures a high degree of familiarity and identification with the unit. The end result is a systematically designed product, based on the input of a diverse group of people, which meets the needs of a complex student population.

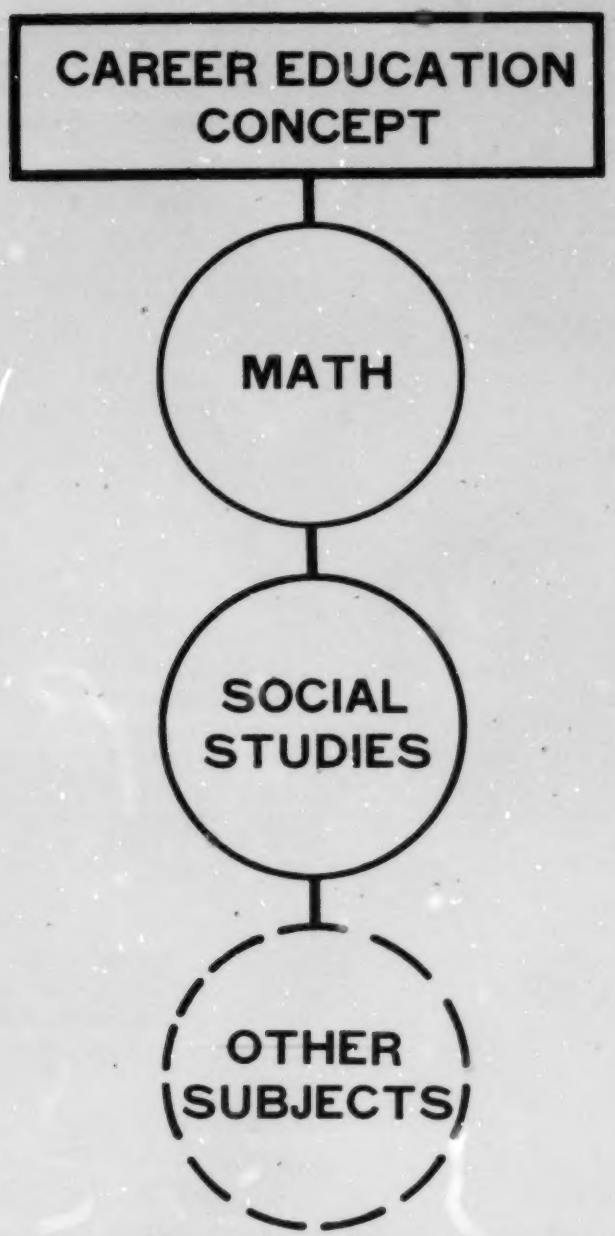
INFUSION STRATEGIES AND APPLICATIONS

As stated, the major focus of this project has been on the development of a variety of strategies to insure a comprehensive career education program. These strategies have focused on process as well as products, so that the components of the project have not only been the development of program materials, but the development of skills within teachers for infusing these program materials into the ongoing classroom activities and developing classroom activities that provide for infusion without specially designed materials.

The infusion strategies discussed in this paper and utilized at KDES have been taken from Leyden and Peterson (1975). Some of the activities have been developed by faculty at KDES, the others are excerpted from a curriculum guide developed by the Anne Arundel County (Maryland) Schools. The first infusion model starts with a career development concept and then presents ways that the concept could be reinforced in various subject matter areas (see Figure 1). For example, the focus might be on the development of the career development concept -- people do many kinds of work. The specific behavioral objective -- the student will identify the different kinds of work people do

FIGURE 1

INFUSION MODEL 1



This model starts with a Career Development concept and then presents ways that the concept could be reinforced in various subject matters.

in the home, school, and community -- can be integrated in several subject areas (see Figure 2).

The second infusion model focuses on the subject matter concept (see Figure 3). In this model a subject area concept is selected. Applications of this concept to identified occupational areas are then addressed. In the example, the mathematics concept of equality/inequality (more than, less than) is the focus of lifebased activities which expose the child to specific occupations (see Figure 4).

The third infusion model has two variations which simply represent two branches that can occur within this model. In the first variation (A), the focus is on the career development concepts which are integrated into many different subject matter areas. This variation represents an expansion of Infusion Model 1 (see Figure 5). In the example, a career development concept in the affective development area is the organizing force and is integrated within a variety of subject matter areas (see Figure 6). The second variation (B) uses a specific occupation as the focus. The specific occupation is then used to teach concepts in subject matter areas (see Figure 5). In the example for variation (B), the occupation of landscaper has been selected as the organizing force and is the vehicle for other subject matter concepts (see Figure 7).

The above discussions represent examples of teacher developed activities. The strategies employed in the development of these activities have also been used in the design of the KDES career education instructional materials.

Twelve career exploration simulations have been developed by the Alliance for Career Education with coordination provided by the National Center for Research in Vocational Education. During the present contract year, KDES is involved in the adaption of the Convention simulation for use with middle school students.

The problem situation in the Convention simulation is one in which workers in a downtown hotel must prepare for a national convention that will soon be held there. The students work individually and cooperatively on a variety of tasks to accommodate convention guests. These tasks include such activities as reserving rooms for and registering guests, taking customers' restaurant orders, planning menus, keeping guests' accounts, and doing linen inventories.

Using the Convention simulation in the classroom is an example of implementation pattern 3A (Figure 5).

A student's exploration of careers connected with the hospitality industry provides the structure of the simulation. The activities involved are integrated in the subject matter areas of home economics, math, social studies, and language arts as the students explore the various occupational roles.

DISSEMINATION

At the present time, KDES is involved in the national field testing of the first of the career education units through a cooperative arrangement with the Media Development Project for the Hearing Impaired. Six instructional programs are now involved in the field test on Unit 1: Feelings: Keys to Values.

Dissemination plans call for release of the first unit by Fall, 1979. Other units will follow in approximately 6 month intervals. Information regarding potential involvement as a field test site or dissemination of unit materials may be obtained from Jan Richardson, Coordinator of Career Education, Kendall School.

REFERENCE

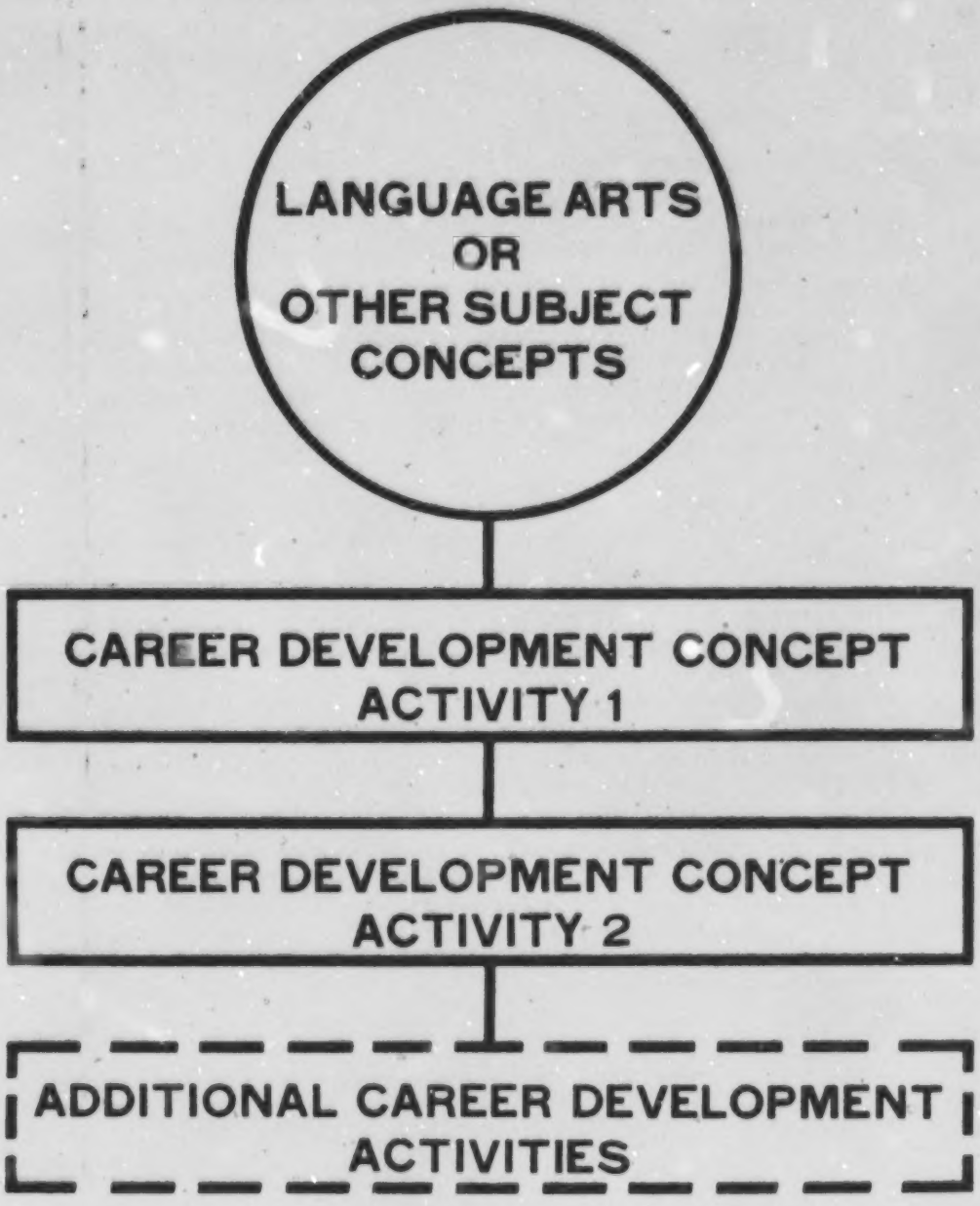
Leyden, M. B., & Peterson, M. P. Career education and physical sciences. Boston: Houghton Mifflin, 1975.

FIGURE 2. An Example of Infusion Model 1

Concept:	Career
Subconcept:	People do many kinds of work.
Objective:	The student will identify the different kinds of work people do in the home, school, and community.
AREA	ACTIVITIES
Math	Given patterns of geometric shapes (circles, rectangles, triangles, squares) the student will (a) make models of workers using geometric shapes, (b) identify the models by the types of work done, and (c) make number stories about the workers.
Science	After going on a field trip through the community, the student will list those occupations that are associated with science.
Science	After discussing problems associated with insects, pests, and harmful micro-organisms, the student will help in making an experience chart about those people associated with the prevention and control of specific diseases.
Science	The student will observe some type of household appliance and speculate as to the types of work done and the occupations of people involved in the entire process that resulted in the appliance -- from miners for the raw materials to the different types of assembly people.
Industrial Arts	Given the necessary tools, materials, and paints, the students will make cutouts of their favorite community workers. The students will use the cutouts to make jigsaw puzzles depicting community workers.

FIGURE 3

IMPLEMENTATION PATTERN 2



A specific subject matter concept is selected and then applications of the concept to specific occupational areas are suggested.

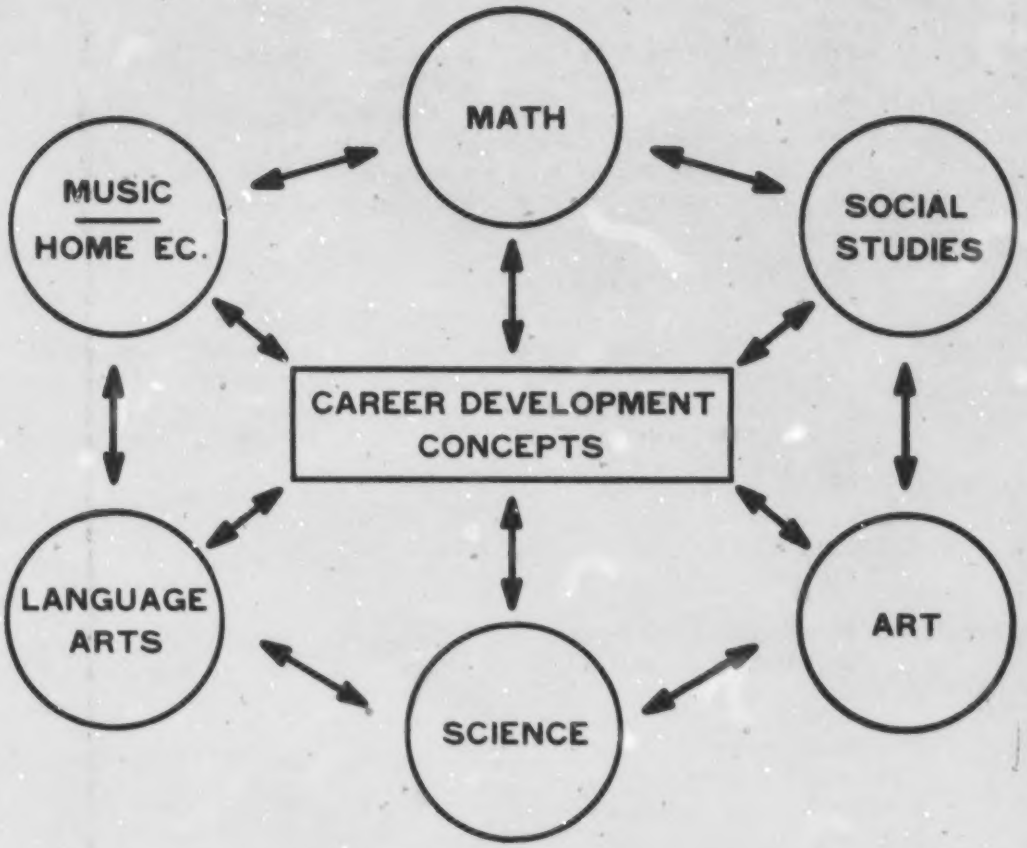
FIGURE 4. An Example Of Infusion Model 2: Mathematics

Concept:	Equality/inequality (more than, less than).
Objective:	The student will be able to compare objects and determine whether there are more Type A objects than Type B objects; whether there are fewer Type A objects than Type B objects; or whether there are the same number of each.

JOB	LIFE BASED ACTIVITY
Bus Driver	Given the group of girls in the room that ride the school bus and given the group of boys in the room that ride the school bus, the student determines whether more, less, or the same number of girls as boys ride the school bus.
Custodian	Given a custodian's supply room, the student determines whether the custodian has more, less, or the same number of cans of furniture cream as floor wax; floor wax as window cleaner, etc.
Landscaper	Given cutouts of trees and bushes, the student determines whether he or she has more trees or bushes or the same number of each.
Nurse	Given cotton balls and bandaids, the student determines whether there are more, less, or the same number of cotton balls as bandaids.
Policeman	Given a group of cars that were given tickets for going too fast and another group of cars that were not given tickets, the student determines whether there are more, less, or the same number of cars that were given tickets as were not given tickets.
Salesman	Given a school store, the student determines whether more, less, or the same number of boxes of cereal as crackers were sold.

FIGURE 5

IMPLEMENTATION PATTERN 3



TWO VARIATIONS:

A. CAREER DEVELOPMENT CONCEPTS ARE USED AS THE ORGANIZING FORCE AND ARE INTEGRATED WITH MANY DIFFERENT SUBJECT MATTER AREAS.

B. A SPECIFIC OCCUPATION IS USED AS AN ORGANIZING FORCE AND THE SPECIFIC OCCUPATION IS USED TO TEACH CONCEPTS IN SPECIFIC SUBJECT MATTER AREAS.

FIGURE 6. An Example Of Infusion Model 3: Variation A

Career Development Concept:	An individual should start developing wholesome attitudes toward all useful work.
Objective:	Given teams of workers, the student will be able to tell why each worker's job is important.
AREA	ACTIVITIES
Science	Given a team of workers such as astronaut, mechanics who worked on space vehicle, and janitor who cleans the space laboratories, the student tells why each job is important.
Math	Given a team of workers such as teacher who teaches math, person who wrote math book, and person who operated machine that stitched the cover for the book, the student tells why each job is important.
Art	Given a team of workers such as artist who designed the book cover, person who works in paint factory, and printer who set up procedures for producing the artist's design, the student tells why each job is important.
Language Arts	Given a team of workers such as newspaper reporter, newspaper editor, and secretary who types newspaper stories, the student tells why each job is important.
Social Studies	Given a team of workers such as mother or father who votes, the President of the United States, and the local mayor, the student tells why each job is important.

Figure 7. Infusion Pattern 3: Variation B

Specific Occupation: Landscaper	ART
SUBJECT MATTER CONCEPTS	ACTIVITIES
Gains control in physical manipulation of media.	Uses point, side, and end of various colors of crayons to draw landscaping plan of home in student activities book.
Establishes a relationship between drawing and reality.	Draws landscaping plan for home which is practical to the child.
Names and identifies colors.	Names colors of trees, flowers, bushes, etc., as they are presented in pictorial and written form on the flip chart.

Specific Occupation: Landscaper	SCIENCE
SUBJECT MATTER CONCEPTS	ACTIVITIES
States the observable properties of an object.	Describes tree in terms like "as tall as a..." or "shorter than a..."
Classifies (groups) leaves according to a scheme arrived at by the teacher and/or the students as a group.	Determines which of the manipulative trees provided are deciduous and which of the manipulative trees are coniferous and classifies leaves accordingly. Classifies by smoothness or roughness, long or short, and other schemes devised by the students.

A CAREER EDUCATION PROGRAM FOR ELEMENTARY THROUGH SECONDARY STUDENTS

Richard Grybos
Janice Hill

The Monroe #2-Orleans Board of Cooperative Educational Services (BOCES) located in Spencerport, New York, has been piloting a developmental career education program for use with elementary through secondary neurologically impaired/emotionally disturbed (NI/ED) and educable mentally retarded (EMR) students. One of the major goals of the BOCES Special Education Program is to assist handicapped students in becoming self supporting adults who are well suited to the careers they have chosen. Prior to the development of this program, handicapped students were primarily given occupational training as preparation for their entry into the working world.

The BOCES Career Education Program is a guided developmental process which provides opportunities for acquiring skills and experiences needed in potential careers. The students begin by exploring their immediate environment and clarifying their values, attitudes, and interests. The students then broaden their insights and experiences to include occupational awareness, skill development and, ultimately, placement in their occupational choice.

THE CURRICULUM

The curriculum is a multilevel structure across 13 levels, organized on a continuum to encompass primary, intermediate, and junior/senior high programs.

Primary (Readiness - Grade 2)

At the primary level, the student is led to explore the immediate environment and determine personal needs. The student is assisted in defining his or her own role as well as those of other significant people in his or her life.

Intermediate (Grades 3-6)

The intermediate level maintains the importance of self awareness, but also encompasses exploration of many work fields. The student is helped to identify the influences that affect one's choice of career.

Junior/Senior High (Grades 7-12)

Junior/Senior High students are concerned with specific jobs they have chosen as possibilities for themselves. Throughout the high school years, the student is refining choices, acquiring the necessary skills for job hunting, and dealing with actual and potential problems that arise in the working world. Thus, the student is guided in handling difficulties that may occur in working situations.

Within a class, students may function on several different levels. These levels do not correspond with specific grade levels and are not intended to be taught within a

defined period of time. Each teacher must determine whether a student has satisfactorily completed one level before progressing to the next. The curriculum design provides the teacher the freedom to instruct between levels by varying the expected mastery plateau for each student.

In some cases, particularly in classes for the educable mentally retarded (EMR), it may be necessary to remain at one level for a couple of years and to vary the experiences and activities each year until the majority of the objectives have been mastered. Primary and intermediate EMR students are not expected to complete all elementary level objectives. The Junior High teacher will need to decide if the student is ready to begin the more concentrated career preparation program. Those students who are ready will then be placed in secondary levels. All others will continue in the appropriate elementary level until it has been determined that they are ready for the secondary levels.

CURRICULUM AREAS

The curriculum was developed by a team of elementary and secondary teachers and designed to be infused with existing academic programs. It consists of sequential terminal and enabling objectives, modules of instruction, and a management system for special education students (K-12) in the following areas:

Self Awareness

The student will:

1. Recognize the relationship of interests, aptitudes, and achievements to the realization of career goals.
2. Learn about self in relation to culture through understanding and experiencing roles.
3. Understand and recognize social, economic, educational, and cultural forces that influence development.
4. Recognize that self knowledge is related to a set or system of unique personal values.
5. Learn to establish goals which, although tentative, are personally relevant.

Educational Awareness

The student will:

1. Recognize that learning is a continuous process occurring in and out of school.
2. Recognize that educational experiences are a part of career development.
3. Recognize that different career directions require varying types of educational preparation.
4. Recognize the significance of language, computational and reasoning development, and the mastery of content knowledge as means of achieving career goals.

Career Awareness

The student will:

1. Understand the variety of occupations found in the world of work.
2. Understand the way in which occupations relate to needs and functions of society.
3. Determine the worker qualifications related to performing the basic tasks of various occupations.
4. Recognize that a career includes progression through developmental stages of educational and occupational experiences.
5. Understand the relationship between career and lifestyle.

Economic Awareness

The student will:

1. Understand the relationship between personal economics, lifestyle, and occupational roles.
2. Understand the range of social and economic benefits associated with various occupations.
3. Understand how wealth is accumulated through savings and investments and how it may influence career and lifestyle.
4. Understand the relationship of

present and anticipated occupational status to economic trends found in the community, state, and nation.

Decision Making

The student will:

1. Identify and state personal goals as part of making career decisions.
2. Become proficient in identifying and using resource information in making career decisions.
3. Understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with goals, and taking steps to implement the course of action.

Beginning Competency

The student will:

1. Develop the skills required to identify the objectives of a task, specify resources required, outline procedures, perform operations, and evaluate the product.
2. Become familiar with the use of basic tools, equipment, and materials associated with business, commercial, and industrial activities.
3. Develop an understanding of the interpersonal relationships resulting from the interaction of people in various occupational roles.
4. Develop educational and occupational competencies before moving to the next stage of preparation for entrance into an occupation in the career area of personal choice.
5. Develop the skills necessary for employment in the career of personal choice.

Employability Skills

The student will:

1. Recognize the implications of working, with and without supervision, independently, and with others.
2. Relate information about self in selecting, learning, and performing duties.
3. Develop the work habits and attitudes necessary to enter an occupation in the career area of personal choice.

Attitudes and Appreciations

The student will:

1. Recognize the responsibilities to self and others when accepting a task or job.
2. Recognize individual differences and become tolerant in interpersonal relationships.

Each level of the curriculum is designed to:

1. Provide activities based on the specific behavioral objectives.
2. Correlate with the existing reading, math, science, and social studies curriculums.
3. Use a definition of careers broad enough to encompass leisure pursuits and nonpaid jobs.
4. Avoid racial and sexual stereotypes, particularly in portrayal of job roles.
5. Portray a cross section of careers requiring various educational backgrounds and skill levels.
6. Relate student's own interests and skills to the instructional program and possible careers.
7. Utilize a variety of activities (e.g. valuing exercises, games, reaction stories, and role playing).
8. Create materials specific to the local geographic area.
9. Strengthen the student's proficiency in decision making.
10. Provide a management system for continuous evaluation.

FIELD TEST RESULTS

The Career Education Curriculum was field tested during the 1977-78 school year in primary through secondary NI/ED and EMR classrooms. The field test also included teacher inservice training for the purpose of meeting three major goals:

1. To become familiar with the program

goals and objectives.

2. To develop career education activities which correlate with other academic programs.
3. To have the participants become skillful teacher trainers in the full implementation of the Career Education Curriculum during the 1978-79 school year.

The pilot program indicated a need for further development in broadening the scope and sequence and in correlation of career education materials and activities to program objectives.

These needs will be met during the 1979-80 school year by a committee of teachers. The eventual outcome will be activity packets that will correlate with the program's terminal objectives.

In the fall of 1978, full implementation of the Career Education Program began with inservice training of the entire special education staff. The training was provided by administrators and the pilot teachers. The teachers were provided with an overview of the curriculum in order to evaluate their students' needs and to decide on an appropriate entry level. Inservice training stressed that career education objectives can be integrated into all aspects of the school day. Classroom teachers thus were able to successfully correlate career education activities with reading, language arts, mathematics, social studies, science, music, and art programs.

The development and implementation of the Career Education Program has given the BOCES Monroe-Orleans #2 staff first hand experience in putting theory into practice. We have incorporated the philosophy of career education into a K-12 special education program and generated concrete goals, objectives, and activities. The total integration has provided teachers with the satisfaction of seeing program development result in student growth.

SELECTING AND CUSTOMIZING INSTRUCTIONAL MATERIALS FOR EXCEPTIONAL STUDENTS

Carole M. Johnson
Joan Simon Jones

Career development is a process which occurs throughout the lives of people who are handicapped as well as those who are nonhandicapped. How that process is facilitated inside and outside each person's formal educational experience can affect the individual's perception of personal and occupational needs and the careers and lifestyles that each person selects and/or has the opportunity to select. One of the many methods available to facilitate the career development process is the use of print materials. Since many handicapped youngsters neither acquire the information nor make the associations that most nonhandicapped youth do through inference and superficial exposure, they need, throughout their school experience, well planned, sequentially organized instructional materials which focus upon career development.

Teachers, because of their intimate involvement in the lives of children, must recognize their special potential for assessing, selecting, and customizing career instructional materials to meet the needs of their students. The teachers must also recognize that such a customization process can proceed efficiently and economically, that it can be a liberating process for them, and that it can help their students define and encourage their own personal exploratory processes.

CONSIDERATIONS FOR MATERIALS SELECTION

As teachers and others engage in the process of selecting materials for students, they must attend to the characteristics of the student, the learning situation, and the concepts to be learned (Hull, Barry, & Clark, 1976). When print materials are deemed to be the appropriate medium for teaching a given concept to a learner in a particular learning situation, five factors should be considered: nonstereotypic representation, readability, comprehensibility, concept development, and format and tone.

Nonstereotypic Representation

The need for educational materials to represent the broad variety of persons within our society is beginning to be addressed by educational product developers (American Association of School Administrators, n.d.; Macmillan Publishing Co., 1975; Rosenberg, n.d.; Tyler, 1977). These efforts, however, have primarily focused upon nonhandicapped men and women from diverse cultural and racial backgrounds. Exceptional individuals, when represented, are frequently depicted in low paying, traditional male-female occupations; as objects of pity, fear, or humor; and/or as having extraordinary personal strength for overcoming the barriers they encounter (Biklen & Bogdan, 1977; Schwartz, 1977).

In order to aid those who develop, select, and use educational materials,

the Consortium for the Representation of Exceptional Persons in Educational Materials has developed a set of guidelines for appropriate representation (1977). These guidelines offer assistance in determining how and in what ratio exceptional persons, as members of our larger society, should be represented in educational materials. In addition, the Consortium guidelines have been elaborated upon and applied to career education materials (Newell, 1978).

Figure 1 presents a materials analysis checklist designed to aid those who develop, select, and use instructional materials in determining how persons with various characteristics are depicted in relation to occupational roles. The checklist is designed to help its user answer two basic questions: Does the material reflect the diversity of people performing various types of occupations within our society? Does the material reflect the fact that women and men of different races and ages who are handicapped and nonhandicapped perform in similar types of careers? The checklist is also intended to assist materials developers and selectors in attending to the frequently subtle cues given to students regarding careers which are appropriate for them as individuals. It should be used in conjunction with the guidelines developed by the Consortium and/or those developed by Newell.

Readability

Readability formulas are designed to estimate the reading difficulty of print materials, with the readability quotient derived from them expressed in terms of grade level equivalents (Coleman, 1977). These formulas normally take into consideration some indicator of sentence length and individual word difficulty. Sentence difficulty is often determined by dividing the number of words by the number of sentences in a 100 word passage. Word difficulty for a given passage of material is estimated by either comparing the words in the narrative to a vocabulary list or by counting the number of syllables in the words. The most frequently used readability formulas include the Fry (1968) and the Dale-Chall (1948).

Readability formulas can be helpful in the initial stages of material selection; however, they should not be relied upon as the sole or primary decision making tool. Since each formula relies upon a different method for calculation, different readability quotients may be derived for the same passage when several different formulas are used (Harker, 1977). Furthermore, low readability quotients do not ensure comprehensibility of materials, since the formulas do not take into account the difficulty of the concepts expressed or the structure of the sentences in the passage. Relatively difficult concepts can be expressed in simple one and two syllable words using several dependent clauses and be incomprehensible to the reader. In addition, since readability formulas were derived to analyze basal readers and standard textbooks, they cannot be easily or accurately applied to technical materials.

Comprehensibility

Comprehensibility or learnability (Klausmeier, Ghatala, & Frayer, 1974) refers to the ease with which concepts can be comprehended or learned. How concepts are expressed within written materials often determines how efficiently and effectively the student is able to comprehend them. If the major concept to be derived by the reader is vaguely phrased or is buried in an excessive amount of verbalization, it may be missed by many readers. This is especially true for individuals who do not learn efficiently through inference.

As indicated previously, mater-

FIGURE 1. Materials Analysis Checklist.

Type Of Occupation*	Sex		Race						Handicap		Age			
	M	F	Black	White	Asian	Spanish American	Native American	Other	Learning/ Behavioral	Sensory	Elementary	Secondary	Adult	Senior
Home living skills														
Managerial														
Professional														
Service														
Skilled														
Technical														

*Indicate frame or page number

ials with a low readability quotient may be incomprehensible either because the concepts expressed are extremely complex or because the sentence structure is difficult. The previous experience of the learner is also a critical factor in determining comprehensibility. For example, the word neighborhood has three syllables and may have a difficulty level of 8.0, but conceptually very young children may have a basic familiarity with what the word means from their experience. How the word is used in relation to the language in the rest of the narrative could define its comprehensibility, despite the fact that its presence may cause the readability quotient to be elevated.

As teachers and others evaluate career education materials, they must ask themselves how clearly the language used expresses the central concepts, how context clues and other definitional cues are presented, how the language flows in the narrative, and what the learner's previous experience with the concepts is.

Concept Development

Intimately related to comprehensibility is concept development within educational materials. Concept development refers both to concept level and to the number of concepts conveyed in a given piece or section of material. Concepts vary in difficulty and include ranges from simple to complex, concrete to abstract, specific to general.

Clearly, teachers must be sensitive to the readiness of individual students to acquire a given concept. Harker (1977), in discussing Piaget's theory that youngsters prior to age 11 years have difficulty comprehending abstract concepts without reference to concrete examples, suggested that "secondary students have only recently acquired the ability to comprehend abstract concepts, and that the nature and number of concepts introduced in content materials must be recognized as a major determiner of reading difficulty." (p. 127)

Educators should ask several questions as they examine career education materials for use with youngsters whose reading functioning is below that of their peers: How much experience has the learner had with concepts of lesser difficulty within the same concept class (Blount, 1971)? Is the concept presented in a step by step manner? Is sufficient practice and reinforcement provided in the use of the concept (Baumeister, Hawkins, & Holland, 1967)? Can the learner's attention be focused on the relevant dimensions of the task (Gold, 1973)? Are aids for self monitoring provided (Milgram & Furth, 1967)? Are numerous examples given (Tymchuk, 1973)? Is the learner familiar with the concept words and those used in the examples given (Tymchuk, 1973)?

Format and Tone

Format and tone refer to the way in which the narrative is laid out on the page and the feeling conveyed by the language it contains. Format and tone often determine whether or not students approach the instructional material in a relaxed manner. If the tone of the material is conversational and the format is clear, attractive, and well illustrated, students are more likely to approach it with a positive attitude. For example, a list of 20 vocabulary words and their definitions typed in small type and double spaced, using the word to define itself (e.g., landscape gardener -- a worker who landscapes gardens), is both confusing and overwhelming. Fewer vocabulary words, well illustrated, attractively laid out, and clearly defined are much more appealing and less threatening to the reader.

Similarly, when materials contain page after page of single spaced, small type with little or no variation or illustration, they immediately lose their appeal, especially if the

student is an inefficient reader. However, simply enlarging the type is clearly not the solution. Materials should be laid out in a variety of ways which are appropriate to the flow of the narrative. Additionally, illustrations, charts, graphs, and figures should be clear, nonthreatening, and self explanatory.

METHODS FOR CUSTOMIZATION

Customization is a process for enhancing the comprehensibility of instructional materials efficiently and economically. It requires the application of one or more procedures to existing materials. The procedures involved in customization are used when available print materials do not fully conform to the considerations for selection. Furthermore, these procedures can be used in the development of commercially prepared or teacher prepared materials to aid comprehensibility.

Several customization techniques which can be applied to print materials include:

- Marginal gloss. Questions, tasks, and/or statements are written in the right margin of the text and reference the important concepts within the narrative. This procedure aids comprehension and makes reading active rather than passive.
- Tabs. Essentially the same as marginal gloss, strips of paper upon which questions, tasks, and/or statements have been written are attached to the margin of the text. Tabbing is usually used when marginal space is too limited to add marginal gloss.
- Highlights. Important or key facts in the narrative are underlined with a colored marking pen to focus the reader's attention on the key facts or concepts.
- Marginal arrows. Green arrows may be placed in the left margin to cue the reader to the beginning of sentences or paragraphs he or she is to read. Similarly, large red dots may be made at the end of sentences or paragraphs to designate the points at which the reader is to stop reading.
- Bullets. Large dots are placed within the narrative to designate steps in a task or key points in a list of concepts.
- Boxes. Drawing a box around directions or critical paragraphs within the narrative aids the reader in identifying what he or she is to do or singles out the central point or concept within the material.
- Glossaries. Referred to both before and during the use of instructional materials, glossaries assist students in comprehending the material to be learned. Words printed in medium letters with black marker on large white or beige index cards allow for flexible use. In addition, the words should be defined and used in sentences on the cards. Drawings or pictures cut from magazines and pasted on the cards are also helpful. Long lists of words typed or printed on a single sheet of paper should be avoided, since they appear overwhelming and may be confusing to the reader.
- Sequence cards. Developing sequence cards which identify the steps to be followed in completing a task described in the narrative serves to focus attention on those steps and to encourage review of the entire process to be undertaken.

Although uniqueness of individual learners must be recognized in the development, selection, and customization of instructional materials, it is virtually impossible for product developers and publishers to design and produce materials which specifically address each child's individual needs. Similarly, teachers seldom have the time and resources to design and produce all instructional materials for each child. Clearly, a middle

ground is required. Producers need to understand and employ some product development techniques which can assist them in making materials accessible to a wider range of students. At the same time, teachers need to understand and use similar techniques to assess, select, and enhance or customize existing materials in accordance with individual student needs.

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IMPLEMENTING INDIVIDUALIZED, COMPETENCY BASED EDUCATION FOR EXCEPTIONAL STUDENTS

Susan Reichman
Rosalind Eskew

Educators in the area of career education for exceptional students are very aware of the differing needs of the students attending their courses. Students come into career education courses with varying abilities and past experiences. Within one career education course each and every student may have a different goal in mind. For example, one student may want to master only basic skills while another prefers to leave the course at an advanced level.

The fact that these students are classified as exceptional students also points to another major consideration. Each of these students has special learning needs. These students learn at varying rates and often need different types of mediated instruction. One student might learn readily using print instruction while another may need to spend a longer period of time listening to an audiotape on the same material. One student may do best by working with a peer tutor, while another requires additional practice and periodic review.

BASIC PRINCIPLES

How does the instructor meet all these needs within the same course? One effective and efficient way to deal with the needs of each individual is to present instruction using an individualized, competency based approach. Competency based education encompasses three major principles, each of which facilitates the education of exceptional students. First, clearly stated learning outcomes, or competencies, are the foundation of each course. These competencies are derived from those skills necessary for job success. Each competency is further developed into performance based, measurable objectives. Instruction developed around job competencies and related objectives helps ensure that the exceptional student is learning the exact skills necessary for career success.

Second, the knowledge and skills that the students are required to master and the means for assessing this mastery are stated in advance. This information is available to students, parents, employers, and others who want to know what competencies are required of the learners. The prespecification of required knowledge and skills aids the student in selecting a career which is most appropriate to his or her abilities and interests. Additionally, employers are more likely to hire the exceptional student who has been certified as competent than one who has graduated from a less well defined course of instruction.

Third, instruction within the course is individualized, a necessity in successfully meeting the special learning needs of each exceptional

student. The required competencies and specific instructional objectives are selected to match each student's career goal. The focus in the classroom is to help each learner achieve the specific skills and knowledge that have been identified as necessary for successful on-the-job performance. Flexibility is maintained for the individual learner with regard to instructional materials, resources, and learning time necessary for mastering the selected competencies and related objectives. The student is given instruction in whatever way required and for as long as necessary until competent in the chosen career.

CURRICULUM DELIVERY SYSTEM PROJECT

Most instructors will need some kind of help and guidance in making the transition to teaching in an individualized, competency based mode. Many new teaching strategies are required. In order to facilitate this transition, the Florida Vocational Division, in the last 4 years, has been developing materials to teach preservice and inservice vocational instructors a method for delivering individualized, competency based education to their students. The developmental process for these materials has been largely dependent on input from classroom instructors concerning the feasibility of potential teaching strategies which can be implemented or adapted in almost any type of vocational education setting.

In 1975, the Curriculum Delivery System Project completed the first of three stages in developing these instructional materials. With the assistance of state leaders in vocational education and national experts in curriculum and instruction, a framework phamplet, Individualizing Instruction for Competency Based Education, was developed. This pamphlet proposed a theoretical framework identifying and describing the components of individualized, competency based education.

The second stage for the project, completed in 1976, was to translate this broadly conceived view into concrete, practical teaching strategies. With the help of 50 vocational instructors from a variety of Florida schools and occupational fields, a procedural manual (Delivering Competency Based Vocational Education: A Teacher's Guide To Individualized Instruction) spelling out how to implement these strategies in the competency based classroom was completed.

The third stage for the project was to provide a more extensive training method for instructors, covering how to implement the teaching strategies required in competency based education. The resulting instructional package is Florida's Approach to Competency-Based, Individualized Teaching (FACIT). The goal of the FACIT materials is to provide instruction on how to deliver individualized, competency based education in the classroom. The emphasis is on practical ideas rather than theory or historical information. FACIT provides instructors with specific techniques and strategies that can be used as suggested or adapted to almost any type of instructional setting. A wealth of examples, checklists, and forms from many vocational classrooms are found throughout the materials.

THE FACIT COMPONENTS

In the FACIT materials, instruction is built around 30 teaching strategies stated as competencies. Most of these competencies are further defined through the use of explicit, measurable objectives. A majority of the competencies are taught by multiple learning options, using a variety of media. Pretests and posttests are included to assess mastery of each objective. The materials are designed to be used in differing instructional settings, from college courses to inservice workshops, or independent study.

The 30 competencies are grouped into six basic components, each of which is an integral part of implementing individualized competency based education. The six components include: Goal Setting, Objectives, Criterion Referenced Testing, Learning Experiences, Evaluation, and Instructional Management. Instructors using the FACIT materials select components based on their needs and interests at the time. With the few exceptions of some prerequisites, each instructor can select and sequence the competencies in a similar manner.

Each of the six components provides instruction over teaching strategies that are necessary to meet the principles of individualized, competency based education. What exactly does each one of the six components encompass and how does each contribute to being able to deliver instruction in this manner?

Goal Setting

The Goal Setting component covers the process of helping the student select a specific career that is both the one desired and one in which the student is realistically capable of succeeding. Some students know what career they want and have the abilities necessary for success. Others may select a career in which success is unrealistic, or, the student may be undecided as to the career choice. In Florida, most of the students entering a vocational course have already been helped to make a broad career choice, either by a counselor, a work evaluation specialist, or other personnel. But, the instructor often has to help the student narrow down this broad career to a specific area. For example, an automobile mechanics instructor may have students that achieve careers ranging from specializing in brakes to a master mechanic. The FACIT materials provide instruction in two competencies related to goal setting: identifying sources of goal setting information and helping students solve goal setting problems.

Objectives

The Objectives component takes the approach that clearly specified objectives provide the basis for all activities necessary in the individualized, competency based course. It is through the use of objectives that each student's course of instruction is planned and individualized. Objectives are the key by which the instructor develops, evaluates, and manages the instructional process. The FACIT materials provide instruction over four competencies concerning objectives: identifying, selecting, and sequencing objectives to meet each student's needs, abilities, and interests; analyzing broad objectives into knowledge and performance subcomponents in order to provide complete instruction; writing instructionally complete objectives, including statements of the conditions, performance, and criterion level; and validating course objectives.

Criterion Referenced Testing

The Criterion Referenced Testing component centers around certifying student mastery in order to individualize instruction. The instructor, in the competency based system, uses criterion referenced pretests and posttests to determine exactly what instruction each student needs. Criterion referenced tests also provide major input in the process of evaluating the effectiveness of instruction and as part of the instructional management process. Instruction is provided over six competencies in this component: using pretests and posttests to determine instructional needs; determining whether a written or performance test should be used to assess mastery over specific objectives and exactly what type of test or rating scale is

appropriate; identifying the testing requirements of specific objectives, such as the number of test items or whether retests are necessary; developing and using performance rating methods, including checklists and rating scales; developing and evaluating the quality of selection test items; and developing and evaluating the quality of supply test items.

Learning Experiences

The Learning Experiences component provides a framework for the individualization of instruction through the consideration of task and learner characteristics. As mentioned earlier, students learn at different rates and through different means. These individual differences need to be taken into consideration when planning and delivering instruction. Providing for individual differences becomes even more critical for the success of the exceptional student. In this component, instruction is provided over the following competencies: analyzing task and student characteristics as input to the development of learning experience; planning for instruction based around Gagne's functions of instruction; choosing and using media; reviewing, selecting, and adapting instructional materials; pacing the student; training and using tutors; and grouping students for instructional purposes.

Evaluation

The Evaluation component covers the ongoing process of improving instruction. To ensure that the learning experiences are doing the best possible job in developing students' competence to succeed in their selected careers, the evaluation process must be used. Evaluation determines whether changes are needed, and if so, where. An informal approach is suggested, using information readily available to the instructor. Instruction is provided over two competencies: sources and methods for collecting evaluation information; and using evaluation information to make formative changes in the instructional processes and materials.

Instructional Management

The Instructional Management component ties together all activities that are ongoing in the individualized, competency based course. Delivering instruction in this mode results in a variety of activities going on simultaneously. Systematic strategies are necessary to coordinate student activities, tutor or aide activities, resources, test results, and product results. This component presents some methods for organizing these activities, including keeping records on student progress and performance; ordering and monitoring supplies; allocating instructional resources; using proctors and aides; determining grades, if required; and organizing student, course, and resource records.

Implementation

A question at this point might be whether instructors can be successful in implementing this approach in the classroom. To answer this question, 13 vocational instructors were used to review the FACIT instructional materials and also had the task of implementing the entire system in their classrooms. Each instructor adapted the system to meet his or her special needs and all of the instructors successfully made the transition from the traditional classroom to the individualized, competency based approach.

Of special interest is the Sarasota County Student Center in Sarasota, Florida. This center for exceptional students offers vocational training in business education, building maintenance, food management, child care, hotel-motel services, horticulture, and small engine repair. Basic education courses, including reading, math, social studies, science, physical education, music, art, and

driver's education, are also taught. Of the 13 instructors previously mentioned, 3 teach in this school. Many of the other instructors in the school, both in the vocational and academic areas, learned the FACIT approach through independent study of the materials and began implementing the strategies which allowed them to move from the traditional to a competency based approach.

To look briefly at one example, the business education curriculum offers training as a receptionist, telephone operator, office machine operator, clerk typist, file clerk, mail clerk, stock clerk, cashier, and grocery bagger. Much of the instruction is centered around an operating business called Kwik Kopy, Inc. Profits from this business are used to buy many of the supplies used in the day-to-day operation of the course.

This instructor has implemented, by adopting or adapting the strategies in the FACIT approach, parts of each of the six components. Most goal setting is done in the school Work Evaluation Center, but the instructor helps students to select specific careers using techniques suggested in FACIT. Objectives, already written to meet FACIT specifications, are then selected and sequenced for each student and with that student's input. Tests are used, not to discourage the student, but rather to diagnose needs or problems, determine readiness to move on to the next objective, and as a motivational activity to keep the students progressing. Students in this school often have a history of failure behind them, so strong emphasis is placed on success. Staying with a task until it is mastered, rather than accepting failure, is required.

In the planning of instruction, each course objective was analyzed as to relevant task characteristics, as well as broken down into its knowledge and performance components. Mediated instruction is reviewed for potential use whenever it becomes available, with detailed records kept for later use. Each student who enters the course is also given a preference questionnaire in order to determine basic learner characteristics. All this information is then used to adapt already existing learning experiences or, when necessary, to develop new ones specifically for a student. Students are then assigned learning experiences based on their needs and goals. The emphasis is always on presenting instruction in a manner which will enhance success.

As additional motivation, various achievement awards are given to students and progress is monitored by stars on a progress chart. Information on test results and rate of student progress is used periodically to evaluate the effectiveness of the learning experience and to make indicated revisions. Instructional management techniques involving student participation, with a strong emphasis on recordkeeping and maintaining resource inventories, are used to keep the classroom operating efficiently. Finally, information relating to specific objectives assigned, test results, learning experiences assigned, and progress provides a major contribution to each student's individualized education plan -- an effective way to tailor instruction for each student.

CONCLUSION

Individualized, competency based education is an extremely effective way to meet the instructional needs of the exceptional student. Regardless of the course content, the basic teaching strategies used to deliver instruction in this manner are the same. The FACIT system provides instruction to preservice and inservice instructors in 30 competencies that have been identified as necessary to this delivery mode. Implementation of the strategies suggested in the areas of goal setting, objectives, criterion referenced testing, learning experiences, evaluation, and instructional management will help

ensure that each student receives the best possible education.

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A RESEARCH UTILIZATION MODEL FOR CAREER EDUCATION PROGRAMS

Ray Sankovsky

Career education in its broadest sense was once defined as the totality of experiences through which an individual learns about and prepares to engage in work as part of his or her way of living.

In this sense career education for the handicapped is not a process that is different in "kind" from traditional career education, but rather one that is different with regard to "extent" and "intensity." The handicapped student, if he or she is to be adequately prepared for a career, must be exposed to and versed in the traditional career education model and provided with a more intense and detailed experience in career education.

Critical to this more intense and detailed exposure is the availability of teacher and student resource material. It is this concern for resource and program materials that has prompted the funding of research and development projects for career education through a variety of federal offices, including the Bureau of Education for the Handicapped (BEH). Although there has been an attempt, either through the individual projects or through a network of information centers, to provide these resources to local programs, all too often the products of research and development in career education for the handicapped do not reach the local programs.

When local programs become aware of new resources a barrier to effective research utilization occurs. Either the local programs do not have the financial resources to purchase the materials, or they are reluctant to adopt materials that were developed elsewhere.

Another barrier occurs when the local programs have the resources and are willing to adopt the materials, but there is no scheme or plan of action to integrate the resources into an ongoing program.

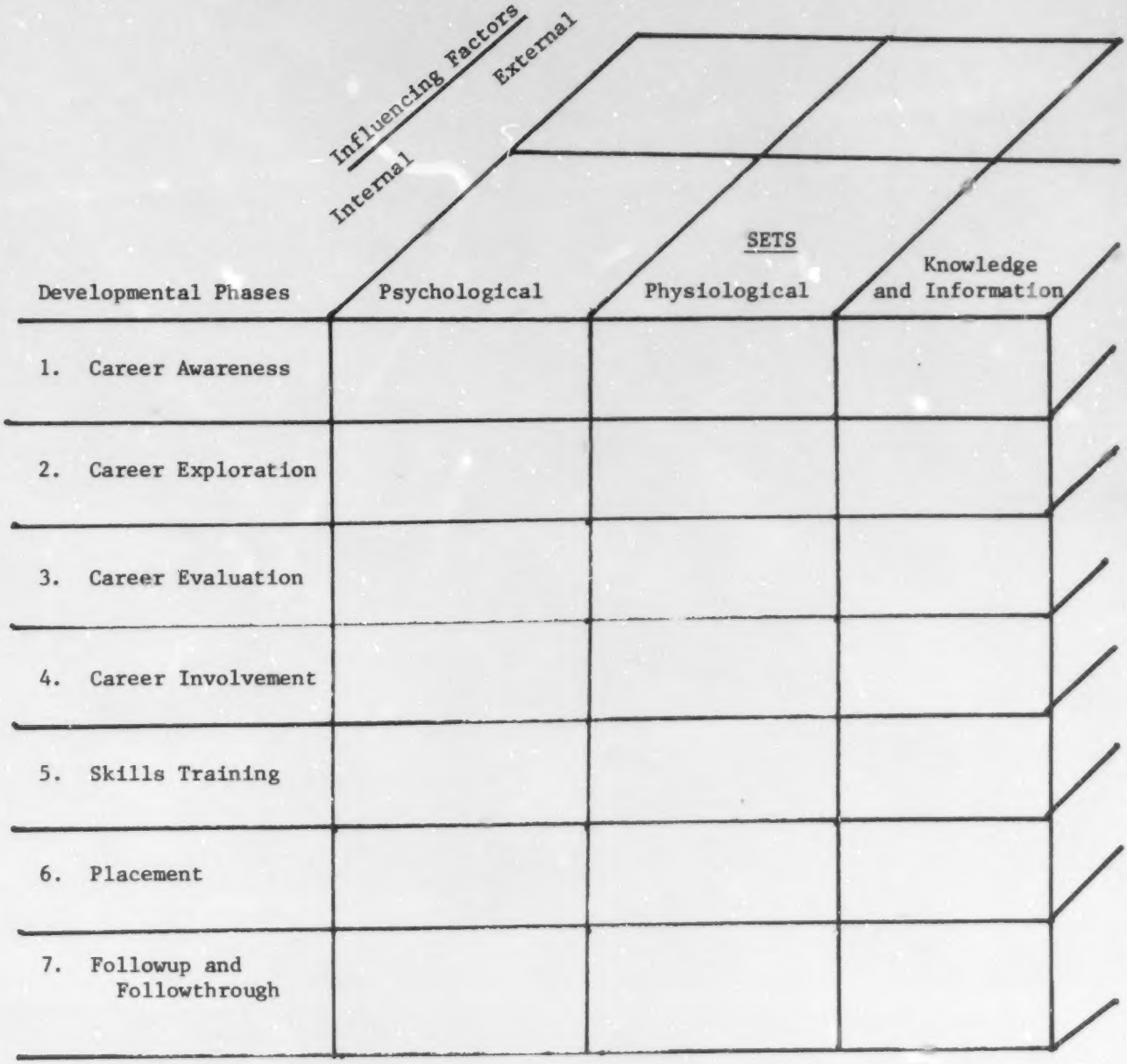
The research utilization of career education materials and resources for the handicapped focuses on a model that would provide:

1. Information on product availability.
2. Access to the resource material by the local systems.
3. A model for integrating the resources into an ongoing program.
4. Training to local system personnel on the integration and utilization of the materials.

For the purpose of this paper it is assumed that information on a variety of resource materials on career education for the handicapped is already available. What is presented here is a research utilization model or matrix that would provide a structured format for both identifying the individual student needs and for providing the necessary career education services.

Figure 1 provides an overview of a three dimensional model. The

FIGURE 1. Interaction Matrix Model On Career Education For The Handicapped



remainder of this paper will identify the various components of the model and discuss their interrelatedness.

DEVELOPMENT PHASES

The proposed career education for the handicapped model focuses on secondary education programing and addresses the following developmental phases:

1. Preparation for careers (awareness).
2. Explanation of careers (matching interests and abilities).
3. Evaluation of career potential (vocational or occupational evaluation).
4. Involvement in career activities (work and related experience).
5. Skills training.
6. Placement.
7. Followup and followthrough.

Each of these seven developmental phases can be identified in time for any individual. The phases are self explanatory and have been discussed extensively in the career education programs. The remaining two dimensions of the model, influencing factors and sets, have not been traditional components of career education planning and will need some additional explanation.

INFLUENCING FACTORS

The term influencing factors refers to internally or externally oriented conditions that will either facilitate or retard the individual's progress through the career development phases. Internal factors are those related specifically to the student, such as interest, motivation, drive, mobility, stamina, and self concept. External factors are those that influence the student's progress through the career development phase but are not within direct control by the student, such as physical barriers, attitudinal barriers, appropriate resource material, and staff availability.

It is important to note that the internal or external influencing factors are often viewed from the standpoint of limitations. In their truest application, the external or internal characteristics must be considered in terms of assets and limitations. Limitations identify only deficiencies and screen out potential progress through the career development phases, whereas assets are guideposts pointing in the direction of and facilitating a more positive career development path.

SETS

The third dimension of the research utilization model is described in terms of physiological, psychological, and knowledge information sets. These sets can be referenced across both the internal and external influencing factors previously described as the second dimension of the model.

The term physiological set refers to those physical characteristics of the student or the environment that would influence the student's progress through the career development phases, either in a positive or a negative way. For example, a severe orthopedic disability may hinder or restrict a student in the career development phases. This would be an internal-physiological interaction. Likewise, a physically inaccessible building, classroom, or work situation would be an example of an external-physiological interaction, if the student were restricted in mobility.

The term psychological set refers to feelings, attitudes, perceptions, biases, and related psychological characteristics that would influence the student's progress through the career developmental phases, either in a positive or a negative way. An example of the internal influencing factors in relation to psychological set could be the student's self image or concept. An external influencing factor and psychological set may relate to the attitudes of teachers, employers, administrators, or the public toward the student.

The term knowledge and information

set refers to level of awareness, specific factual information, training, background, and level of understanding of both the student and those who are involved in the student's career development program. As in the physiological and the psychological sets, the knowledge and information set could influence the student's progress, either in a positive or a negative way.

THREE DIMENSIONAL INTERACTION

The best way to demonstrate the three dimensional model would be to provide a few specific examples of the interactions across the three dimensions.

Psychological Set--Internal

The psychological set in relation to the internal or student aspect relates to such concepts as awareness of responsibilities, being on time, coping skills, decision making skills, values, independence, assertiveness, positive self regard, realistic expectations, and tolerance for frustration. Some of the internal psychological concepts are more critical and related to the specific developmental phases from awareness to placement. For example, being on time is important throughout the career development process, but it is critical, at the placement phase of development, to job survival. This does not mean that teaching a student to be on time can be postponed until the placement phase, but rather it demonstrates the need for developing this set throughout all phases. For example, many vocational rehabilitation facilities or workshops provide skills training for the handicapped. It is a common practice for these facilities to institute a job readiness phase prior to the rehabilitants' completion of the training program. However, if job readiness were critical to successful placement, it should be an ongoing function of the total program and not a discrete component of the skills training phase, labeled job readiness training.

Psychological Set--External

One concept that immediately comes to mind is the attitude of other individuals toward the handicapped. Attitudes can encompass such characteristics as fears, biases, expectations, rejection, and overprotection. To what extent can such an external-psychological set influence the career development phases of the handicapped individual? The most obvious considerations such as fears and bias are self explanatory, but constructs like overprotection have a tendency to cross over into the internal psychological sets related to the handicapped individual and generate dependency and concepts of low self esteem.

Physiological Set--Internal

Internal physiological sets relate to such factors as stamina, mobility, range of motion, dexterities, and more global factors such as ability to drive an automobile.

Physiological Set--External

The external physiological set refers to such components as architectural barriers, communication devices (phone amplifiers, large print reading material, audio cassettes, and records) and detailed task analysis for the slow learner.

Knowledge and Information Set--External

The interaction of knowledge and information as it relates to external factors includes such components as affirmative action guidelines by employers, cognitive mapping or learning styles, prescriptive teaching, the world of work, and teaching job seeking, personal-social, and occupational guidance and preparation skills.

USING THE MATRIX IN TERMS OF INTERACTION

The three dimensional interaction of the matrix cells through the career development process is unique for each handicapped individual, and it is the educator's responsibility to be aware of the interactive elements and to facilitate the handicapped individual's career development throughout the various phases. In essence this model provides for the development of an individualized career education plan.

Operationalizing the Model

The term research utilization becomes important when the model is operationalized. Through research utilization the many resource documents, materials, strategies, training programs, and specific knowledge that have been developed over the years in relation to career education for the handicapped are identified and used. Each of these elements is reviewed to determine an appropriate location in a slot or cell in the career education model. The model then specifies the availability and the most appropriate element to be used to overcome the barriers in the career development process.

EXPERIENCE BASED CAREER EDUCATION FOR MILDLY MENTALLY DISABLED STUDENTS

Carl H. Larson
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Experience Based Career Education for the Mildly Mentally Disabled (EBCE-MD) is an exploratory vocational program that helps students decide what they want to do for the rest of their lives. Students determine interests, then choose occupations and work situations they would like to know more about. Experience becomes a key word in EBCE-MD, as students observe and participate in a variety of jobs in the community. Placement at each site varies from 3 to 9 weeks. During placement, the student's activities are supervised by a resource person. While on site, students complete academic activities related to the work situation. Satisfactory completion of academic assignments while participating in EBCE enables the student to earn high school credit required for graduation.

EBCE is for mentally disabled students who need exploratory experience before they enter the next two phases of their program--work adjustment and work experience training. EBCE does not compete with the paid program in which many older students are enrolled.

DEVELOPMENT OF EBCE-MD

EBCE-MD was developed by Iowa Central Community College of Fort Dodge, Iowa, with the assistance of a grant from the Department of Public Instruction. The community college cooperated with Arrowhead Area Education Agency and the local schools that implemented pilot projects. Humboldt Community School was established as a demonstration site.

MEETING REQUIREMENTS FOR ACADEMIC CREDIT

Learning activity sheets specify the lessons in academic areas that must be completed by the student. These activity sheets may be developed solely by the Learning Coordinator or through a cooperative effort of the student and Learning Coordinator. Most of the activities are assigned to be completed while the students are at the site thus correlating the academic experience with the work situation. Activities may also be built around other sources such as books, pamphlets, magazines, television, or other community resources. One of the most important aspects of the learning activity sheets is that the student is learning and applying knowledge in a real, rather than simulated, situation.

INHOUSE DAY

Students are assigned to the job site for 1 to 3 hours, 4 days a week, with a fifth day designated as "Inhouse" day. The inhouse day is an individual appointment with the Learning Coordinator to evaluate completed learning activities and to develop new activity sheets. In addition, the Learning

Coordinator helps the student plan further placement and gives guidance regarding the present placement. Students may also be involved in counseling sessions or other small group activities, as well as catching up on other assignments. During the approximately one-half day that the student is not assigned to EBCE, he or she is assigned to the Special Class with Integration.

PARAMETERS OF THE EXPLORATORY PROGRAM

First, the program must be community based. The business site becomes an extension of the special education classroom. Scheduling is highly individualized. Each student's EBCE program is independently planned with the instructor as part of their individualized education program (IEP). The program is voluntary and no pay is given to the employer or the students. EBCE is exploratory and the students are not productive laborers. Sites change to meet exploratory needs of each student. Academics are correlated to the job site.

The Basic Parts of the Plan

Five new area education agencies for implementation are selected each year. Work experience instructors and special education classroom teachers are identified for further training. New leaders at Iowa Central Community College are trained and new materials provided by the funding grant are acquired. Sites are developed in each selected community and the program and the process are evaluated. Projects in other local education agencies beyond the pilot schools are also developed.

COST OF THE PROJECT

Local and area education agencies that are presently employing work experience instructors should not incur additional costs to implement EBCE-MD. Implementation of this project will mean alteration in the present job assignments of work experience instructors; but costs incurred in implementation for each area education agency would consist of training time (one week) at the training center, located at Iowa Central Community College, and some funds needed to develop experience sites. The cost will vary depending upon the number of work experience instructors to be trained and the number of sites to be developed. The cost of technical assistance to each area education agency and training of work experience instructors will be met by a special grant provided through the Department of Public Instruction to Iowa Central Community College. The grant also provides for all student instructional materials.

THE LEARNING PROCESS

The five steps described in the following paragraphs explain the student activities in the EBCE-MD experiential learning process.

Assessment

With the guidance of the Learning Coordinator, students' academic and career strengths, weaknesses, and interests are determined. Much effort is made to determine realistic interests for mentally disabled students that can be explored in the community. The writers at the EBCE Appalachia Educational Laboratory (AEL) developed several instruments to help in the assessment stage. They have been rewritten by Iowa Central staff for special education students. These instruments are contained in the Student Program Guide. In addition to components of the Student Program Guide, each student is given the SPIB (Social and Prevocational Information Battery) from McGraw-Hill and segments of the Brigance Inventory of Basic Skills.

Exploration

The second step is for the students to choose career clusters to explore. The students select, from 50 worker trait groups, the two to three groups with which they would like to become

involved. Again, AEL materials were revised for the special needs students. To help with this initial selection, the Learning Coordinator has the student fill out a "Request for Placement" form which is a result of the student's work in the learning guide.

Placement

Site placement begins after a week or two of assessments and orientation. Each student has the opportunity to be placed at a minimum of four sites per year. These locations and situations have been carefully prepared by site developers who work with the resource people ahead of time. Before the student arrives on the "scene" much groundwork has already been completed.

Onsite Activities

On site the students complete activity sheets that will earn units of credit in 1 of 16 EBCE-MD courses that cover four basic EBCE disciplines: mathematics, English/communications, personal/social skills, and career education.

Using an activity sheet, the student will understand what he or she is supposed to do on site to complete a given project. These sheets are prepared by the Learning Coordinator with help from the information that the site developers listed in Experience Site Learning Guides. These sheets become a type of contract between the student and the Learning Coordinator and give a real purpose to the site placement. Points (toward credits) are awarded for completion of activity sheets. Then, the Learning Coordinator can award Carnegie units of credit with a grade of A, B, C, D, or F for student work on the project. The student is involved in the evaluation process as the Learning Coordinator reviews the activity sheet and the information gathered by the student.

A vital part of onsite work is the frequent visits made by the Learning Coordinator to the places where students are placed. By visiting with students or possibly just the resource person, the Learning Coordinator is able to coordinate the efforts with the academic project and trouble shoot any possible problems. Good public relations between the student, teacher and resource person help to allay the initial fears that some people in the community have regarding placement for the mentally retarded.

Evaluation

Evaluation of student progress is the final step. The Learning Coordinator completes evaluations during and at the end of each student's placement on site. Resource people in the community help to fill out written forms that describe a student's personal and work traits.

Inquiry

All of these steps are based on the process of inquiry, an essential component of experience based career education. Inquiry involves five steps:

1. Defining the problem.
2. Gathering data.
3. Analyzing data.
4. Generalizing.
5. Communicating the conclusion.

The student who is mildly mentally disabled will certainly need help in the inquiry process. Yet, at the demonstration site in Humboldt, it was discovered that a careful Learning Coordinator could guide the student to more inquiry than had been previously expected for mentally disabled students.

PART III

Vocational Assessment and Training

WE'RE OPEN FOR BUSINESS: CAREER EXPLORATION FOR HANDICAPPED SECONDARY STUDENTS

JoAnn Balmer
John P. Jewell

> Condemn no man and consider nothing impossible, for there is no man who does not have a future and there is nothing that does not have its hour.
>
> The Talmud

There is a lot of action for secondary students with handicapping conditions at Tacoma Public Schools' Center located at Hill Garden. These students are meeting their individualized education program (IEP) goals and objectives in a real work environment, which is administered and managed by the school district. Project ACTION allows students an opportunity to increase their knowledge of the work situation. In addition, they are paid for their efforts.

This is not a typical workshop or classroom. These are not typical young people. Their classroom is the world of work and they are, for the first time, being given the opportunity to explore their career talents.

THE STUDENTS

The ACTION Center has students representing all disabilities. There was concern by some as to the philosophy of mixing all handicapping conditions into one program. This has not been a problem. The students have something to give each other. A worker with verbal skills sparks the lack of skills in one who has little verbal ability. Social acceptability is improved by having a peer model that has an acceptable social affect.

Vickie, a student with medically diagnosed schizophrenia, was taking 300 milligrams of Mellaril which made academic functioning impossible. She joined Project ACTION and soon was able to cut her medication to a minimum. Her productivity soared to 80% and she began to socialize with others. Now, she is able to be included in a high school resource class with a half day work schedule at ACTION for additional support service.

Gerald is 20 years old and will be leaving school in June. He has worked at the center for 4 months and has been referred to Youth Employment for job placement. He is attending a driving school to develop his skills for completing the oral driving test for a license. Gerald is developmentally disabled, but has skills that would make him a valuable employee in competitive industry.

Perry is multiply handicapped--deaf, developmentally disabled, and physically handicapped. He is graduating soon and his productivity is improving daily. Adaptive equipment is necessary to bring about success on a task. He has experienced a feeling of accomplishment as a worker who has broken through the bands of physical entrapment and become a full, accomplished member of society.

Bob, a moderately developmentally disabled student, says he "loves to earn money" so that he can buy the things he needs. Earning money is the

basic reason given by many of the students when asked why they work at the skills center. Most of the students say they enjoy coming to work (school) and, consequently, they return to high school as better students than they were in previous years. Bob is making money. He appears happy to be part of the work community and is confident that he will be able to graduate from high school.

Project ACTION operates on the progressive inclusion model practiced by the school district. This model is based on the premise that all children can learn and they should have the opportunity to be together in work and play. The ACTION project is designed to carry this premise one step further by extending progressive inclusion into community training agencies and competitive employment.

BEGINNING THE PROJECT

Putting Project ACTION into motion was a difficult test. The concept was new to the Tacoma community. The project is but one of a total set of work experience options available within the Tacoma Public Schools for handicapped youth. Consequently, it must blend and augment existing programs. Some questions have to be answered.

1. Should we pay students for work accomplished in a public school setting?
2. Will relationships with unions and public schools be strengthened by such a project?
3. Will sheltered workshops competing for the same contracts be affected by the competition?
4. Should the district provide on site, actual work experience or only provide the training necessary for a job?
5. Will funding continue as Tacoma faces possible large cutbacks in their basic funding formula?

Project staff and district administrators are currently seeking the answers to these questions.

Identifying Needs

Although Tacoma district had some ongoing programs for disabled students there was a need for coordination between programs, standardized vocational assessment, realistic sheltered training, alternative training employment placement, and a followup study on 1978 graduates.

The Tacoma Public Schools offer comprehensive career/vocational programs for the handicapped. There are special education classes in career awareness and vocational training for special education students. Some handicapped students receive postsecondary training at the Bates Vocational Technical School. Goodwill Industries provides a site for a work activity center managed by the district. A community lab program provides a variety of work settings in the community; part of the staff connected with the Division of Vocational Rehabilitation are housed in the school district; manpower monies are used for some limited experiences for the students; summer work experiences are provided; and the Youth Development Conservation Corps works closely to provide outdoor settings for handicapped youth.

Although the programs in the district appeared comprehensive, sensitive teachers and administrators knew that there were still many unfulfilled vocational needs of the handicapped. Consequently, JoAnn Balmer was hired to identify those needs. As an experienced special education and regular teacher she put a needs statement together in collaboration with many groups which eventually lead to a grant proposal.

Funding the Project

The basic steps in writing a grant were followed using the Needs, Objectives, Procedures, and Evaluations (NOPE) concept. Needs were identified, objectives were written that correlated directly with the needs, and procedures were established and the evaluation written to relate directly to each need

and objective. To further establish direction input was gathered from teachers, the community, supporters, parents, administrators, industry and business leaders, handicapped individuals, as well as inside and outside district agencies.

Once the grant was written, funding was sought through four channels:

1. P.L. 94-482 (Vocational Education), which provides monies for some equipment, two assistants, a certified teacher, and a secretary.
2. District funds for building remodeling and maintenance, operating costs, as well as mailing costs.
3. Contract profits for the purchase of needed workshop equipment, such as a pallet jack, automatic staplers, goggles, ear plugs, respirators, a hot glue gun, and tape dispensers.
4. State Special Education funds.

The final funding was a combination of all these sources.

PROJECT PROCEDURES

Project ACTION involves the implementation of a total preoccupational and occupational system for students with a variety of handicaps. The project procedures include standardized assessment (What are you good at? What are you interested in?), experience in trying out abilities on various work tasks, and an opportunity for employment and/or training alternatives in the community.

Student Assessment

The standardized assessment instruments available to Project ACTION are the Vocational Information and Evaluation Work Samples (VIEWS) on site, the Jewish Employment and Vocational Service (JEVS) at Tacoma Goodwill Industries, and the SINGER Vocational Evaluation System at the Tacoma Comprehensive Employment Services Assessment center. A line assessment (observations of performance) is an ongoing process for each student.

The project's ultimate goal for the student is the selection of an alternative. Available alternatives offered to the student are:

1. Continued classroom vocational program monitored objectives, competence based.
2. Further vocational training in available alternative areas.
3. Monitored direct employment.
4. Referral to a community developmental center.

An assessment report is written on each student before the staffing and IEP conference occurs with the students and/or parents.

An important link in the program is the classroom work. The extended staff in the secondary schools and at Goodwill Industries work closely with the project. The severely involved students who are unable to be transported to the site work for pay in their classrooms. The teachers collaborate with ACTION staff in an effort to bring many of the project benefits to their students in class.

Experience Opportunities

Experience comes from doing. The experience opportunities at the ACTION Work Skills Center are all carefully planned.

1. Five to ten contracts operate simultaneously. The number of contracts depends upon the space available for the shop. The contracts represent the worker trait groups of sorting, assembling, construction, and clerical. The contracts cover a span of difficulty allowing for a wide range of student abilities and disabilities.
2. One continuing contract provides job stability to the Center's operation. Four to eight additional short term contracts provide a variety of work experiences. Some components of the contracts are placed in classes for severely and profoundly handicapped affording these students the

opportunity to work within their classroom setting. The contracts are obtained through the efforts of the ACTION staff, Tacoma's administrative staff, and the advisory committee.

PROJECT SUCCESS AND FUTURE PLANS

The positive aspects of Project ACTION far outweigh the negative ones. The project is meeting the predetermined needs. Project ACTION is cost effective. Handicapped students are vocationally assessed and trained for employment before graduation from high school rather than requiring additional cost services after graduation. Potential relief for the taxpayer is possible in the future purchase of shop equipment, further assessment instruments, and added building renovation needs.

Project ACTION provides a stepping stone for handicapped students. The schools are doing a good job of educating students in academic and living skills, but upon graduation most students are unable to transfer their school skills into the pursuit of a satisfying career.

The project also provides a bonding potential between community and schools. It is a new application to an old idea and is, therefore, of interest to school and community groups.

The concept of Project ACTION is viable and it is succeeding. Future plans include conducting a summer program and following up on graduates. There will also be an effort to further disseminate the project to other districts and the community so that the available alternatives and the classroom component can be expanded to improve the career education curriculum initiated in Tacoma's special education classes.

Project ACTION includes the underserved developmentally disabled population. A large number of developmentally disabled students are enrolled in the project giving the staff an opportunity to discover new methods of assisting these students to increase work skills. The classroom component for the severely disabled provides work experience for students and research potential for teachers. The extended classroom staff isolate work skills and record data that will aid staff in future program innovations.

The first year has been an experience in cooperation and team work. We are looking forward to added staff and further inclusion into vocational classes in the district's mainstream.

CAREER ASSESSMENT AND ALTERNATIVE VOCATIONAL SERVICES FOR THE HANDICAPPED

Carmen R. Celentano
Diane Sinni
Eileen Griffin

The Area Cooperative Educational Services (ACES) Assessment and Vocational Center of New Haven, Connecticut, was established in recognition of the need for objective data regarding client's skills and behaviors before training or placement was initiated and the need for objective counseling of the client in order to make decisions related to vocational goals. The Center provides services to students who are trainable mentally retarded, educable mentally retarded, emotionally disturbed, learning disabled, unemployed, underemployed, psychiatric patients, high school dropouts, socially maladjusted, hearing impaired, and those who wish to make career changes.

PURPOSE OF ASSESSMENT

The ACES Assessment and Vocational Center aids its clients by:

1. Assisting with vocational planning by increasing the client's awareness of his or her vocational skills, interests, appropriate work behaviors, and realistic information about the world of work.
2. Evaluating vocational skill levels and identifying areas where skill development is possible.
3. Identifying feasible short and long term goals.
4. Suggesting effective plans of action for the attainment of vocational goals.

Assessment for the handicapped individual is one method of information gathering. It is an identification process for strengths and weaknesses of: (a) physical dexterities-finger, manual, motor; (b) physical demands; (c) learning rates; (d) ability to follow instructions-oral, written, or diagrammatic; (e) perceptions-color spatial, form, size, or clerical; (f) academics-reading, math, writing; (g) problem solving ability; and (h) daily living competencies.

The type of work environment required or preferred can also be determined such as inside or outside, sitting or standing, and the amount of supervision needed. Additional vocational behaviors are identified, which include relationships with coworkers and supervisors, breaks/lunch, attitudes, and punctuality.

Evaluation of school age individuals should answer one or more of the following questions:

1. What are the individual's vocational interests and needs? (Exploratory question-through evaluation experiences, identification of these things is possible.)
2. What are the individual's knowledge, skills and abilities? (Assessment question-identify present level of functioning.)
3. What kinds of behaviors are displayed by the individual? (Assessment question-simulated work environment identifies behavior

patterns.)

4. What type of occupation or job will the individual be successful at in the near future? (Prediction question-data obtained will estimate the probability of success or failure in specific jobs.)
5. What services does the individual need? (Planning questions-data obtained will identify individual weaknesses or deficiencies.)

The combination of activities in the assessment process may vary depending on individual needs. Examples of the activities that are provided include group and individual counseling; skill inventory; vocational testing and exploration; hands on work sampling; aptitude testing; math and reading skills analysis; access to technical assistance for medical, psychological, and educational evaluations; referrals to other service agencies and educational institutions; interest, attitude, and awareness testing. It is essential that during evaluation clients should be provided with every opportunity to succeed.

Procedures for implementation of assessment begin with a referral from community agencies and schools. From this an initial client/counselor interview takes place along with an orientation to the evaluation unit. The counselor identifies specific components to be used with the client. The staff uses appropriate researched paper and pencil tests depending on the client's surface abilities as determined by the intake interview or they use audiovisual components (nonreaders, nonverbal) when necessary.

The standardized systems, psychometrics, and interests surveys presently in use include: Bennett Mechanical Comprehension Test, California Occupational Preference Survey (COPS), Gordon Occupational Checklist, Hall Occupational Orientation Inventory, Harrington O'Shea CDM, Self-Directed Search, Adult Performance Level Survey (APL), Adult Performance Level Occupational Knowledge Test, Aptitude Tests for Occupations (Roeder), and Picture Interest Exploration Survey (PIES).

The center also makes use of comprehensive/technical hands on assessment systems such as the:

1. Jewish Employment and Vocational Services Evaluation Battery (JEVS).
2. Vocational Information and Evaluations Work Sample (VIEWS).
3. Valpar Work Sample Components.

The center also capitalizes on career exploration packages as determined by interests and skill levels including Project Discovery, Tomahawk, and SRA Job Experience Kits. Reading and math tests are administered as necessary. The Career Education Resource Center gives clients more information on specific jobs including such things as the Occupational Outlook Handbook and audiovisual materials. With this, the staff reviews all client's data. The counselor/client then synthesize the information and develop a package of information to be fed into the computer.

The Computer Guidance Information System (GIS) is an interactive career information system. Its purpose is to help the user get quick and meaningful information about occupations, post-secondary education, or sources of financial information. A printout of client interests and job market areas are supplied to the client.

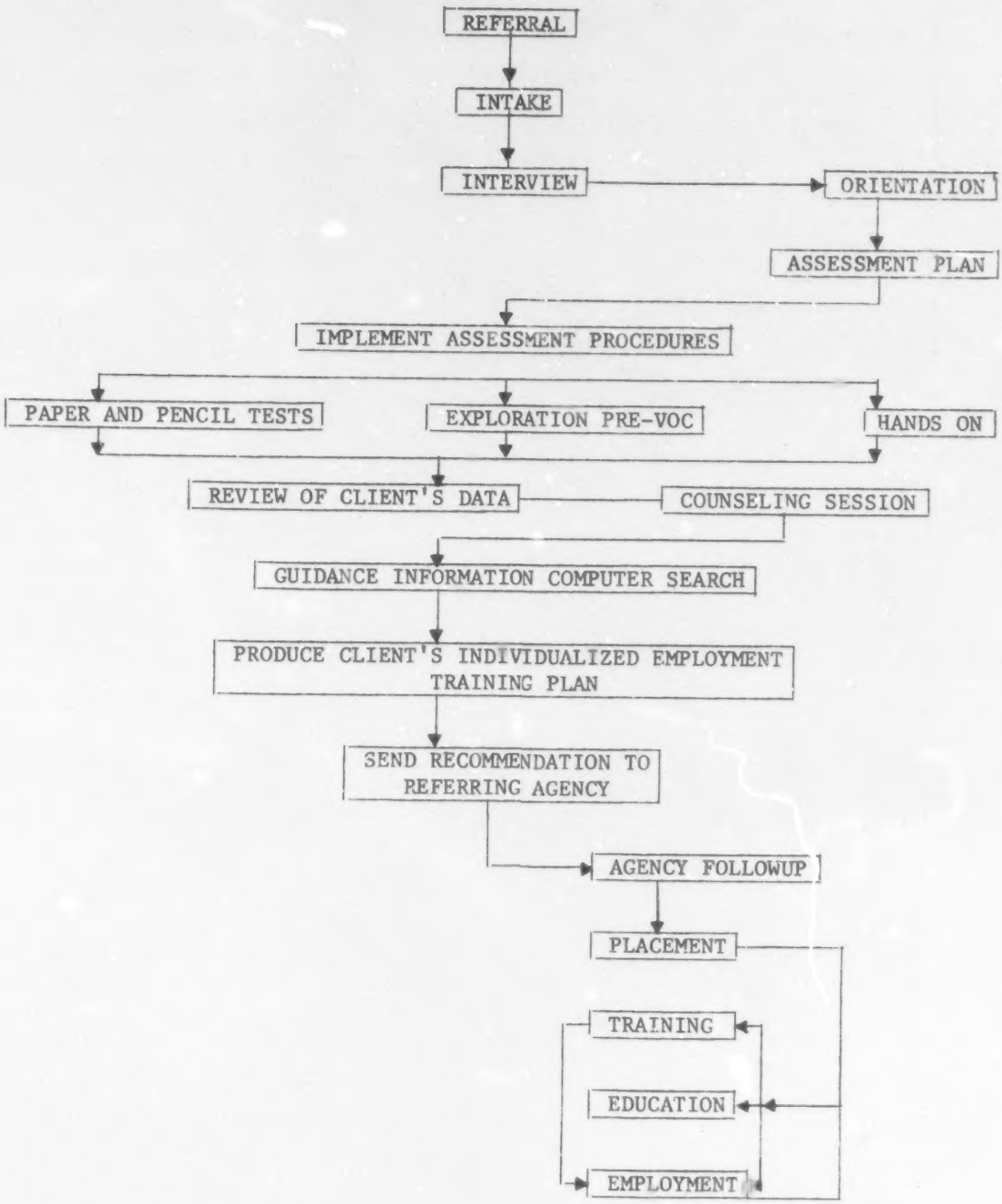
OUTCOME OF ASSESSMENT

After completing the assessment process a plan of action is developed by the client and the assessment advisor. The plan includes the results of the assessment process as well as recommendations for the next steps: training, education, job search services, and/or career employment opportunities. The recommendation may specify that these services be provided by a suitable service or educational agency. Figure 1 is a schematic of the assessment process.

ALTERNATIVE VOCATIONAL SERVICES

The Alternative Vocational Services

FIGURE 1. Client Intake and Referral Flow Chart



(AVS) Program becomes part of the client's program if recommended by the evaluation unit. AVS is a shared time program which has three major components: employability skills and vocational academics, career counseling and development, and vocational training. In addition, a placement service will place participants in part or full time employment when ready.

Employability Skills and Vocational Academics

The employability skills and vocational academic curriculum offered as part of the Alternative Vocational Services Program encompasses two major functions: to provide students with desirable employability and daily living skills in order to function in a working environment and to provide academic exploration and development in areas of student interests and abilities as well as specific vocational needs.

Program content in this area includes job seeking, job getting, and job keeping, along with communication (speaking, listening, writing, and reading) and computational skills. Each person is led to develop positive work habits and job attitudes. Emphasis is placed on social skills and personal development through the exploration of self interest and careers. The curriculum concentrates on money management, good grooming, personal hygiene, and personal transportation. Supplementary areas deal in safety, use of leisure time, recreational activities, consumerism, and human relations.

Career Development Component

The Career Development component deals with attitudinal awareness and exploration of both self and the world in which one lives and works. The program uses various commercial and teacher made activities to reinforce the importance of making informal decisions through knowing oneself and providing the skills to do so.

An important factor in this program is self evaluation. The career component uses activities to initiate the self evaluation process in working situations. This is combined with the development of the relationship between personal values and work values, with an emphasis on narrowing down the career selection process. Certified counselors work with individuals and small groups to enhance those activities.

Integral to the process is assisting handicapped individuals in identifying specific career fields of interest. They will determine highest priorities for job selection and develop a personal occupational file. Individuals supplement this information through research of additional occupational areas to satisfy interests or needs. Instructors reinforce the emphasis of job selection and personal requirements, interests, and skills.

Vocational Training

The vocational training phase begins with an initial exploration of various sites. At its completion, the client selects one of several areas for training. Clients are evaluated by staff on all sites. The areas of training are office support services including microfiche reproduction, food services (banquet and fast food), home health care, agri-horticulture, land and building maintenance, bookbinding, marine maintenance including electrical and small engines, automotive, day care, pest control (exterminating), woodworking, photography, and banking.

The vocational training takes place at actual community job sites. There is a trained professional AVS staff with these students at all times. After several months at one site, depending upon the competency of the client, he or she is moved to a secondary site. At the secondary site the client will be working with an individual employed at that particular site but only with periodic AVS supervision. Thus, the client must progress at a level of semi-independence to gain access to a secondary site. The third

step would be the movement from the secondary site to paid employment.

Placement Service

The major emphasis of the placement service is job seeking, job getting, and job keeping skills. An employability skills curriculum is the major vehicle to attain these goals. This is necessary because the terminal goal of AVS is to place well trained workers in full or part time employment positions. One of the placement person's functions is to establish the client at a primary job site situation based on evaluation data. In addition, the job placement person is responsible for both continued job site development and job placement.

After job placement is established, there is continued followup on the placement. This includes any continuing support services that may be needed by the client.

The program is operational from September through June (a special summer session is also available). The scheduling is flexible. Clients must spend at least 2 hours per day in this program and they can participate in either a morning or afternoon session. The specific times for these sessions depends on the schedules of participating schools. The school district can provide their own transportation or contract with the ACES Transportation Services.

CONCLUSION

In essence, vocational assessment, training, and placement are integral to providing sound vocational planning and programs for handicapped adolescents. The major emphasis lies in the assessment of attitude, motivation, and skill potential. The key factors are the development of realistic training sites that attempt to develop skill levels in the form of the ladder effect, thus allowing the students to ascend at their own rate of speed and potential. Inherent in the training is the reality of the job market itself and the support necessary to assist the client to survive in the new environment of the world of work.

With the combination of assessment and community site training, as opposed to classroom simulation, the potential for clients to succeed has been greatly enhanced. The successful ingredient becomes the "reverse transference" concept which provides growth in both attitudes and behavior through a positive training site experience, and this behavior carries itself back to the classroom atmosphere.

AN ON THE JOB TRAINING PROGRAM FOR EMOTIONALLY HANDICAPPED STUDENTS

Laurent R. Cormier

In the fall of 1977 at Hood Junior High School in Derry, New Hampshire, a program entitled "A Prevocational Building Construction Program for the Emotionally Handicapped Student" was instituted through the combined efforts of Thomas Duval, a special education teacher who is also a behavior specialist, and Laurent Cormier, an industrial arts instructor. This was the first phase of a three part on the job training (OJT) construction and prevocational program which was developed to combine the use of vocational and career education as a tool to supplement academics in hopes of reactivating the learning process of students whose education had been retarded because of emotional difficulties.

THE SHED PROJECT

Prior to this time, all special needs students had been combined into one industrial arts class which met once a week. Since it was impossible for the instructor to adapt a program to meet all of the students' needs, an unsatisfactory situation with little chance for positive learning existed. Therefore, during the summer of 1977, the Shed Project was designed. Under this new program, all of the special needs students were no longer scheduled into one industrial arts class, but instead the learning disabled, the educably mentally retarded, and the slow learners were mainstreamed into regular industrial arts classes. Remaining were a group of students who had been identified as emotionally handicapped, and who, due to the severity of their problems, were placed in a sheltered classroom under the instruction of the behavior specialist. It was for these students that the Shed Project was written. Thus, the target population of the program became a group of 6 to 12 White male adolescents, ranging in age from 12 to 15, who came from broken homes, had arrest records, were involved with drugs, had approximately a third grade reading level, and possessed an extremely negative self concept.

Project Goals

The project had two major goals: first, to create a success oriented environment for the student to the extent that it will lead to improved responsibility and positive attitudes toward self, peers, school, and adults and, second, to develop and improve the prevocational skills of the student to the degree that he or she will gain confidence and skill in working with tools and material.

Method

The Shed Project is a self supporting program which involves building and selling for profit utility storage sheds for customers at the job site.

The profit is distributed to each member of the class in the form of carpenter's tools with each student's share being determined by his or her attitude, behavior, and skill development.

Staff

Two people are directly involved in this project, an industrial arts instructor and the behavior specialist who is the sheltered classroom teacher for the emotionally handicapped students. Auxiliary support is provided by a guidance counselor and the assistant principal.

Student Eligibility

A student must be identified as emotionally handicapped, using a formal assessment procedure that follows state regulations. He must also demonstrate a desire to participate willingly. This is determined by an informal interview between the staff and the student, and any student who does not initially desire to participate is given the opportunity to enter the program at a later time. To date, all have participated.

Rules and Procedures

As a motivational factor and as a tool for improving self esteem, the students, through discussion and interaction with the staff, develop rules and procedures and also determine what the consequences will be for serious misbehavior.

The Crew Concept

The class is organized into a crew of workers which includes a foreman, safety man, tool man, stock man, grievance man, and substitute. The objective of the crew concept is to have each individual share all responsibilities by giving him the experience of both labor and management. Initial crew placement is determined in an interview between the student and the staff in which a student job application is completed and discussed. During the course of the year, the crew positions are rotated so that each student has the opportunity to perform different tasks and assume various responsibilities.

Program Incentives

Three or four buildings are constructed during a school year with the first being built in the school shop, thus allowing for the development of the crew concept in a contained area. All other buildings are constructed at the customer's job site, and it has been found that student performance is improved outside of the school building as most students have felt threatened by the school institution. A greater amount of physical and mental flexibility is also possible in the outdoor environment. Since the buildings are large (6 feet by 8 feet, 6 feet by 10 feet, 8 feet by 10 feet), the students are able to relate to working with real projects, not merely simulated or scaled down versions. The students are treated as employees, being paid for their effort in the form of carpenter tools. A reciprocal agreement between the employee and employer states that any damage to tools or materials as the result of irresponsibility is assigned to the employee and that his share of the profits shall be diminished by an amount equivalent to the value of the material. Life survival skills such as reading, basic computation, and measuring are made relevant and are taught and reinforced both on the job and in the sheltered classroom. The other students in the school develop a new attitude toward these handicapped students as they build and sell actual sheds.

Schedule

The program requires the scheduling of a 1 hour period at the beginning of the week for instruction, evaluation, and other administrative matters. A minimum of 4 additional hours are provided for the construction work and

continuity is maintained if each work session is composed of at least two consecutive school periods.

Teacher-Student Resource Materials

Textbooks are not used in this program, and as a substitute each student is issued a notebook in which to keep copies of rules, procedures, student evaluation sheets, teacher made handouts, blueprints, shop vocabulary terms, quizzes, and notes. Emphasis is placed on the visual approach to learning, and therefore, the safety, use, care, and maintenance of tools, lumbering, and career education are presented using films and filmstrips. Students are exposed to the real world of work through field trips to such places as sawmills, a housing development under construction, an architect's office, and a lumber yard. As a supplement to the program, people, including a county forester, a building inspector, a surveyor, a civil engineer, a contractor, an electrician, a plumber, and a concrete contractor work with the students at the job sites as consultants and instructors.

Student Evaluation

There are no grades given in this program. Instead, an evaluation process reflects student progress by evaluating performance as "highly acceptable," "acceptable," or "not acceptable." This progress is recorded on a series of charts and most of the information is the result of decisions made by the student and the instructor concurrently. Both the teacher and the student keep copies of the evaluations.

Behavioral Management Data. Chart 1 records behavior extremes by denoting appropriate behavior with a (+) and inappropriate behavior with a (-). It is used "on the scene" to record behavior immediately following an incident. For example, Bryan torments Gary by jabbing him with a board. Gary nearly blows up and is about to retaliate, but instead he tells Bryan to either stop or be reported to the teacher. Two situations took place. First, Bryan's behavior was grossly inappropriate and, therefore, under his name on the chart in one of the unused squares the date would be recorded, a minus placed under the date, and, finally, the reason recorded under the diagonal line. Second, Gary would receive a plus (+). This particular instrument is necessary in determining individual shares of the profits.

Daily Log. At the end of each session the student must make a judgment regarding his accomplishment, deciding whether or not he worked efficiently and behaved appropriately, and ther he must write a description of his performance in his log (see Chart 2). In addition to serving as an evaluation tool, the log provides a functional exercise in basic writing skills.

Student Evaluation Rating Sheets. This is a crew evaluation tool which is filled out at the end of the week. The foreman evaluates each member of the crew's performance and, in turn, each crew member evaluates the foreman's performance. The instructors also complete a rating sheet for each student, and by comparing their sheets with those of the students, any discrepancies which may need investigation can be noted.

Progress Record Chart. This is a system for recording exact psychomotor skills developed over the course of the year. Each student has a personal copy of the chart in his notebook and there is a poster size chart displayed in both the shop and the sheltered classroom listing all of the students' names. A student is checked off when he has demonstrated safe, efficient, and responsible use of a tool, technique, or operation. This evaluation process serves as a motivational tool in that hidden rewards are built in. For example, the first student to complete nine steps may receive a nail apron, carpenter's pencil, or other

CHART 1. Behavioral Management Data

Each student will be given a (+) for exhibiting positive behavior performance and a (-) for negative behavior performance.

The following are examples of what is considered appropriate and inappropriate behavior:

(+)	(-)
A. Avoiding a fight	A. Fighting
B. Verbal kindness to peers	B. Verbal abuse of peers
C. Verbal kindness to teachers	C. Verbal abuse of teachers
D. Respectful use of tools	D. Misuse of tools, intentional
E. Carrying out teacher directions	E. Following directions
F. Arriving and performing according to schedule.	F. Tardiness
G. Exceptional clean up	G. Poor clean up
H. Following safety procedures	H. Disrespect of safety rules

Gary	Bryan	Bill
2/12 + A	2/12 − A	2/19 + E
		2/20 − B

CHART 2. Student Daily Log

NAME Hill (Last) Gary (First)

DIRECTIONS: a) Fill in your name. b) Fill in the date.
c) To the right of the date, list out your major accomplishments for this date.
d) Under the date, check off whether or not you were an efficient worker.

DATE	
5-12-78 ☑ Yes ☐ No	1- Measured & cut 2x4's for front/rear wall plates
	2- Kept my eyes out for safety problems
	3- Cleaned up machine area
5-13-78 ☑ Yes ☐ No	1- Measured & cut 2x4's for side walls
	2- Safety man
	3- Clean-up
5-14-78 ☑ Yes ☐ No	1- Cut & nailed cripple studs
	2- Safety
	3- Clean-up
5-15-78 ☐ Yes ☑ No	1- Worked on Cripple studs
	2- Safety
	3- Clean-up
5-16-78 ☑ Yes ☐ No	1- Worked on Cripple studs again
	2- Safety
	3- Clean-up
5-19-78 ☐ Yes ☑ No	1- In school suspension - smoking
	X
	X

inexpensive reward. While not extremely significant, this system adds some fun to the class.

Quizzes. Short quizzes are given periodically. It is explained that testing is an integral part of advancement in fields such as construction, electronics, and police and fire work. Due to the low reading levels of the students, all quizzes are given orally while the student follows along on a printed copy. They are corrected immediately to provide immediate feedback. Where appropriate, performance evaluations are administered. For example, a student would demonstrate the dismantling, honing, assembly, and correct adjustment of a hand plane as a test of his knowledge of the tool.

Instructor Evaluation Check Off Sheet. This is a monthly report which is completed by the instructor through discussion with each student and is considered a formal evaluation.

Effective Behaviors in Vocational Areas. Completed quarterly by the instructors, this is a formal assessment which parallels the Instructor Evaluation Check Off Sheet but is more representative of evaluating vocational skills.

Customer Evaluation Report. This form is filled out by the customer after completion of a storage building. Its primary function is to give the instructors an outside perspective of how the crew is perceived by the community.

THE SUMMER ENVIRONMENTAL EDUCATION CONSTRUCTION PROJECT

This project was the result of the achievement of positive behavior modification and the development of prevocational skills in the students while they were participating in the Shed Project. The initial goal was to continue the Shed Project through the summer, but to modify it so that the students could get paid for their work. An investigation lead to two resources: The Comprehensive Employment and Training Act (CETA) Summer Youth Programs and the Derry School District's plans for developing an environmental education facility for use by elementary and junior high school students. A program was developed which met the criteria and goals of all parties involved as a result of negotiations with the county CETA office and the school district.

Over an 8 week period, under the direction of the special education instructor and the industrial arts instructor, a crew of 20 disadvantaged youth constructed, on a 51 acre Derry School District site, a 24 foot by 24 foot mountain cabin, two "solar one holer" privies, a bird blind, and a weather station. They also cleared and developed a series of nature trails. The forest was managed by thinning and selling fire wood, with the profits being reinvested into materials for the project.

The construction of the building included clearing the site, excavating, mixing and pouring cement footings, building a stone foundation, framing, siding, and roofing the structure. In essence, a "big shed" was built using the skills that the students had acquired during the school year. However, due to the ages of the students and the lack of a power source, 90% of the building was constructed with hand tools.

According to CETA's regulations, the employees had to be economically disadvantaged and, fortunately, all participants in the Shed Project qualified. Also, one half of the students had to be female and one half of the total number had to be 14 to 16 years old with the other half 16 to 18 years old.

Two crews were developed, a construction and a trails crew, and students were rotated depending upon interest and the acquisition of skills needed at the time.

The materials for the project, costing approximately $1,400.00, were purchased through Title IV funds.

The youth salaries (minimum wage) totaled $15,000 and were paid by CETA, while the supervisor's salaries, at $200.00 per week each, were jointly covered by CETA and the School District. The students were limited to a 30 hour work week.

The project was evaluated to be successful, and it will be continued this summer. Current plans are to harvest some of the timber from the land, mill the lumber and build a bunk house so that, as part of their environmental education program, elementary students who have never spent a night camping in the woods could camp out and still be close to home.

SOLAR GREENHOUSE PROJECT

This project was written as a proposal which was granted by the State of New Hampshire under the authority of P.L. 94-482, innovative and exemplary projects. It is currently in operation.

The Solar Greenhouse Project expands and diversifies the two previous programs by:

1. Using the behavior and construction skills of the experienced students as role models and leaders to the new students.
2. Entering into the modern technology of solar energy as an alternative source.
3. Providing involvement for the remaining special needs population in the school.
4. Introducing horticulture as a new occupational cluster.
5. Bridging the generation gap by having senior citizens working with the handicapped adolescents in the greenhouse.
6. Integrating curriculum by having special needs students who are in high school return as aides to the program.

The program is divided into two primary work clusters--construction of the solar greenhouse and horticultural activities. During the fall of 1978, under the direction and guidance of the industrial arts instructor and the special education instructor, and with consultation from local building tradespeople and the Pinkerton Academy vocational staff (the local high school, a private agency), the students participated in the construction of the greenhouse which included surveying, excavating, mixing and pouring concrete footings, laying the block wall foundation, pouring the slab, wood framing, applying "SUN-Lite" glazing film, roofing, building a storage sink, and constructing the air thermal collectors. Greenhouse equipment such as flats, benches, and cold frames were also built.

The horticultural activities involve a cooperative effort between the special needs students, the high school horticultural structure, senior citizens from the Nutfield Heights Senior Citizens Center, whose facilities are adjacent to the junior high school, and a local nursery. As part of this phase the students and senior citizens start seedlings of flowers and vegetables, plant trees, propagate plants, make flower arrangements and, in the spring, conduct an open house to display and sell their plants. The senior citizens and students also plan to plant and maintain a vegetable garden at the senior citizen center during the summer.

CONCLUSION

The flexibility of these three projects has helped to assure that the goals and objectives can be realistically achieved. For example, at times it is necessary to have students participate in one or more phases of the program in order to maintain interest and provide for successful experiences. On other occasions it is necessary to remove the adolescent from the program and design activities specifically matched to his or her immediate needs.

To date the projects have produced acceptable results in improving the following areas:

1. Helping the student develop to his or her potential.
2. Providing success oriented experiences.
3. Stimulating and motivating the student through participation in full scale, realistic projects.
4. Developing world of work survival skills.
5. Modifying and improving behavior.
6. Improving a negative image of school and authority.

AN ALTERNATIVE APPROACH TO VOCATIONAL TRAINING OF HANDICAPPED INDIVIDUALS

Elaine A. Beason

Vocational training for handicapped students is still in its infancy. A majority of handicapped high school graduates are either underemployed or unemployed resulting in a personal loss for themselves and society. This concern has been publicly expressed since the early 1970's and is still an important concern (US Department of Health, Education and Welfare, 1973; Phelps, 1976).

A major reason that handicapped graduates continue to be underemployed or unemployed is that educators fail to offer them adequate preparation. Current educational programs available to high school handicapped students do not provide realistic adult living and working conditions. Handicapped students may receive exposure to the "world of work" through work-study programs and/or develop vocationally oriented skills; however, this is only an approximation of actual living and working requirements. Why should educators expect students to transfer learning in vocational training when academic subjects must be taught in a totally concrete manner?

The alternative vocational training program presented in this paper addresses these concerns. The program offers a pragmatic approach that can be economically and systematically developed and implemented in current educational programs.

AN ALTERNATIVE APPROACH

This alternative approach to vocational training for the handicapped is based on four principles:

1. Handicapped individuals have a right to meaningful and competitive employment.
2. Handicapped individuals may require additional training time and specialized instruction to maximize and equalize entry level capabilities for meaningful and competitive employment.
3. Community businesses and industries do not have the extra time or personnel necessary to maximize and equalize capabilities of handicapped applicants and employees.
4. Educators are not knowledgeable about specific and discrete job requirements that handicapped workers will have to meet.

The objective of the alternative approach is to collect and analyze actual independent living and job requirements within a community or geographical area and then to use these requirements as the basis for a diagnostic battery and an education/training curriculum (prevocational and vocational). The diagnostic battery (standardized and criterion referenced) is derived from a data bank of these collected requirements. It offers explicit information on the prevocational skills a student needs to

develop and a continuum of best to least potential job sources as they relate to a student's strengths and weaknesses.

Bases for the education/training curriculum (prevocational and vocational) are derived from the data bank of collected independent living and job requirements. The actual requirements are used as goals and performance criteria for the vocational training curriculum. Delineation of prerequisite skills of the collected requirements are used as the bases for the prevocational curriculum. For example, if an actual job requirement of totaling number of hours worked (daily, weekly, monthly) is collected through job analysis, prerequisites to that skill would be:

1. Converting minutes to hours and hours to minutes.
2. Adding 4 and 5 digit numbers.
3. Adding 2 and 3 digit numbers.
4. Adding 1 digit numbers.
5. Graphically writing numerals with and without a model.
6. Counting numerals.

Completion of this delineation process provides a sequentially organized prevocational and vocational curriculum based on actual independent living and job skills as opposed to a curriculum based on presumptions of what a student may need to succeed in the adult working world.

SYSTEMATIC IMPLEMENTATION

The systematic procedure for implementation is outlined in Figure 1. The following discussion will elaborate upon each step of the procedure.

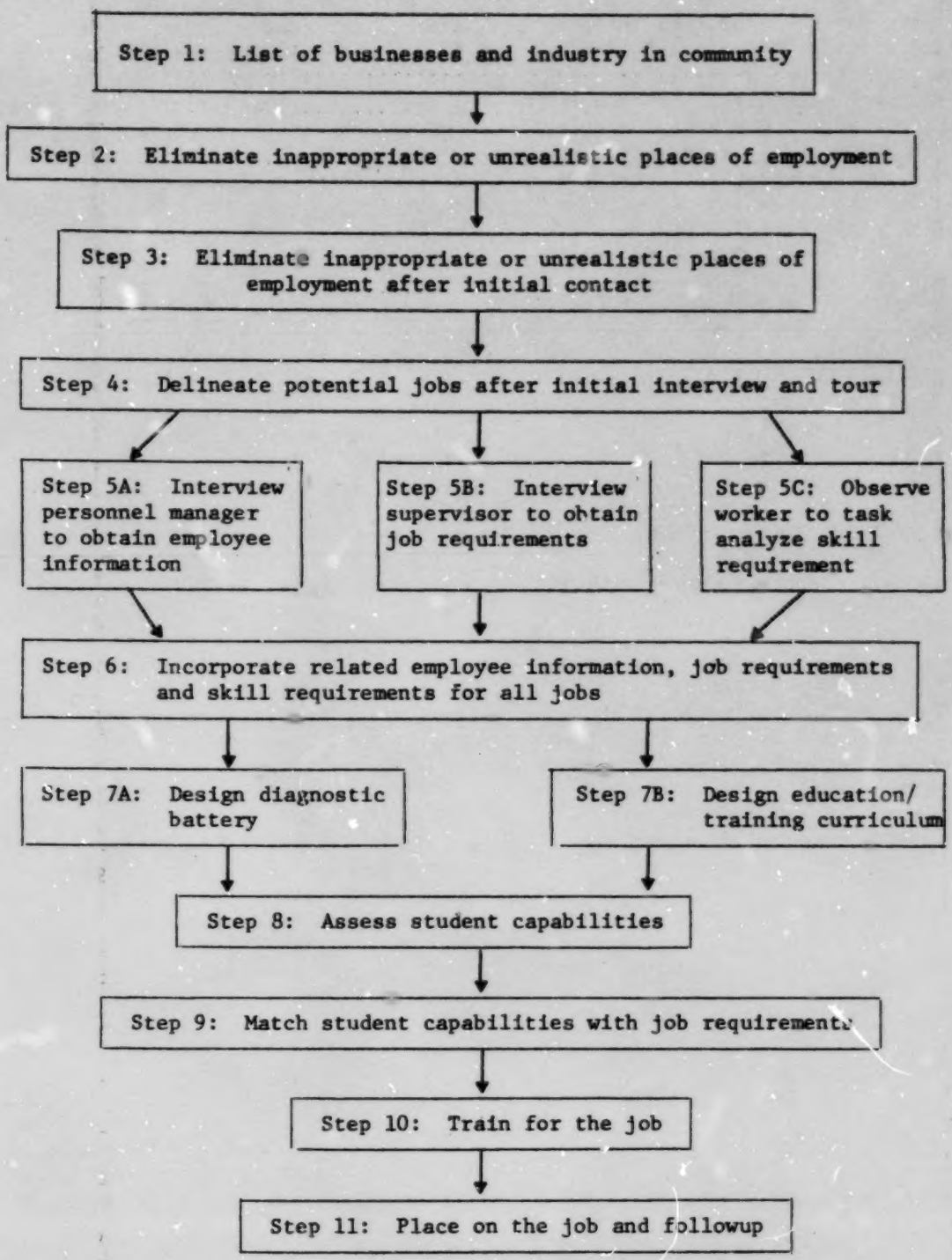
Step 1: List businesses and industries in the community or selected geographical area. The yellow pages of the telephone book is a valuable source of categorized occupations and services. It can be used as a resource to begin the list. Each entry into the list is reviewed as to whether or not it is a realistic job source. For example, professional offices and some small retail stores are not realistic sources if all responsibilities are met by the professional or an assistant. However, even though some handicapped students would not realistically train for a top level position, there are positions that aid and support others. If the place of employment is large enough, an aide or supportive position could be a realistic job and consequently would be included in the initial list.

Step 2: Eliminate inappropriate or unrealistic places of employment. School or agency personnel who are familiar with each place of employment on the list should be identified. They can eliminate inappropriate or unrealistic entries based on the employers' reputation of cooperating with school programs and the handicapped. If it is a small enough community, this information is readily attainable. After this step the list should be small enough that visits to each place of employment can be planned.

Step 3: Eliminate places of employment after initial contact with employers. Some employers might not wish to participate. Others might not have realistic or potential jobs for the handicapped. Still others might be delighted with the prospect of making a contribution to an education/training program, hiring a pretrained employee, or employing a handicapped individual. At the completion of this step, a definite list of cooperating employers should be formulated.

Step 4: Delineate potential jobs after initial interview and tour of each participating employment source. There might be more than one job within each place of employment. If possible, it would be advantageous to include more than one job since only one analysis of general employee requirements would be necessary. Also, a student who is prepared for one job would already be competent in general employee

FIGURE 1. Procedures for Implementation of Vocational Training System


Step 1: List of businesses and industry in community
Step 2: Eliminate inappropriate or unrealistic places of employment
Step 3: Eliminate inappropriate or unrealistic places of employment after initial contact
Step 4: Delineate potential jobs after initial interview and tour
Step 5A: Interview personnel manager to obtain employee information
Step 5B: Interview supervisor to obtain job requirements
Step 5C: Observe worker to task analyze skill requirement
Step 6: Incorporate related employee information, job requirements and skill requirements for all jobs
Step 7A: Design diagnostic battery
Step 7B: Design education/ training curriculum
Step 8: Assess student capabilities
Step 9: Match student capabilities with job requirements
Step 10: Train for the job
Step 11: Place on the job and followup

information and could train for the other job with less time involved. At the conclusion of this step, a job cluster should be formulated. The jobs within the cluster are the bases for implementation of the program.

Step 5: (a) Interview the personnel manager to obtain general and related employee information, (b) Interview the job supervisor to obtain specific performance and skill requirements, (c) Observe the worker on the job to obtain dependency rate of performance and skill requirements on job success and for the purpose of task analyses. This step is the most involved and time consuming. It is of extreme importance to gather and collect all pertinent information. Thoroughness will directly affect the success of future employees who train in the program.

Step 6: Incorporate general and related employee information and performance and skill requirements of all jobs into the data bank of information There should also be an analysis of all requirements to determine the degree to which each affects job success. This somewhat subjective rating will be used to match student capabilities with potential job sources and ultimately assist in the selection of the best potential job source. The compilation of data eliminates duplicate listing of requirements and streamlines the development of a diagnostic battery and a prevocational and vocational (general information) curriculum.

Step 7: Design a diagnostic battery and education/training curriculum. Using previously identified performance and skill requirements and their respective ratings (see Step 6), select evaluation instruments that will measure the student's ability to meet each specific requirement. Many currently used tests can satisfy this process. For example, the Wechsler Intelligence Scale for Children measures discrete capabilities found within intelligence. The Detroit Tests of Learning Aptitude measures specific aptitudes that could possibly be applicable in the diagnostic battery. If a criterion referenced evaluation is more appropriate, it should be developed. If inclusion of all performance and skill requirements into the diagnostic battery is too cumbersome, only those requirements on which job success is 75% to 100% dependent should be used.

The design of the vocational education/training curriculum is organized according to the following outline:

I. Orientation
   - A. Rules and regulations
   - B. Employee benefits
   - C. Plant or business layout
   - D. Pay schedule and paycheck
   - E. Time keeping and time clock operations
   - F. Application and other forms
   - G. Conduct rules

II. Basic Academic Skills (for specific jobs)
   - A. Reading
   - B. Mathematics
   - C. Writing

III. Pre-Skill-Development (for specific jobs)
   - A. Gathering work materials
   - B. Preparing work station

IV. Skill Development (for specific jobs)
   - A. Actual performance and skill development
   - B. Meeting entry level criteria

V. Post-Skill-Development (for specific jobs)
   - A. Closing procedures
   - B. Cleaning up work station
   - C. Putting up work materials

With this outline as a guide, more discrete information to be learned and skills to be developed should be specified. A competency based curriculum is developed from the specified list (Beason, 1977).

The prevocational curriculum is designed by specifying skills prerequisite to those included in the vocational curriculum. A suggested

outline for this competency based pre-vocational curriculum is:

I. Personal Health and Hygiene
II. Mathematics
III. Communication
IV. Socialization

Step 8: Assess student capabilities. Administration of the previously designed diagnostic battery should be completed with all students. This is an important step in that it is a basis for potential job selection. Each student's strengths and weaknesses are profiled to indicate intra-individual differences for each student. This profile will be used in the individual educational program.

Step 9: Match student capabilities with job requirements. The best potential job source for each student should be matched with the student's measured strengths and weaknesses, interest, and motivation as well as his or her parents' opinion, interest, and motivation. The job that contains the most requirements measured to be student strengths is considered the best potential job source. Also, the degree to which job success is affected by each student strength should be considered. The decision is not steadfast or final. It is, rather, a starting point for training.

Step 10: Train for the job. The training of students must be highly organized, and include decisions concerning classroom and individual student management. It is suggested that two separate work areas be established: (a) a classroom in which pencil and paper activities are taught and (b) a simulated job training station area in which actual job skills are developed. Individualized instruction is facilitated through the use of competency based instruction.

Step 11: Place a student on the job and followup. Once a student reaches competency in all requirements and consistency in production rate and quality, job placement can be made. Theoretically, a well trained student would be an individual who could apply for and obtain employment on his or her own. The employer would not necessarily be concerned with the applicant's handicap, but rather with his or her qualifications and ability to succeed on the job. However, theory does not always work. The educator might need to assist the student in obtaining employment. Depending on student employment regulations within the school and place of employment, the student might be able to count actual work experience for high school credit.

Followup after student employment can provide insight into the effectiveness of both individual student training and the total training program. Employers, students, and parents should be interviewed at several time intervals after employment is obtained. If additional training is indicated, provisions can be made available.

FIELD BASED IMPLEMENTATION

The Texas Rehabilitation Commission (TRC) granted financial support to the Tri County Cooperative, Commerce Public Schools, Commerce, Texas, for the purpose of prototype development of the alternative vocational training program described in this paper. The design of the program has been completed and it is now being implemented through the training of 30 students. There are graduates who obtained employment and are still employed, as well as graduates who obtained employment and are no longer employed. Research data on the entire program are still being gathered. Longitudinal as opposed to immediate results are being sought.

TRC has provided financial or consultative support to other public school districts in Texas. At the time this paper was written, 83 school districts in Texas and several throughout the United States were implementing this alternative approach to vocational training. Additionally, TRC has published prototype materials, The

Project FIT -- Implementation Handbook (1976) and prevocational curriculum handbooks, and distributed them to interested individuals and school districts.

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VOCATIONAL EVALUATION IN A PUBLIC SCHOOL SETTING

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Career education is becoming accepted as one of the most appropriate vehicles for bringing people who are handicapped from a level of nonemployability to one of productive participation in society. This vehicle should be delivered by means of a continuum of career related services in order to utilize fully the potentials of exceptional individuals. Such a comprehensive continuum provides for the objective evaluation of vocational skills prior to the preparation and placement stages of the educational process.

Historically, vocational evaluation has been performed by community agencies supported by vocational rehabilitation agencies. However, career education and vocational evaluation are essential for all types of handicapped individuals--a thought not shared by rehabilitation administrations. In an effort to provide this evaluation service to the handicapped on a noncategorical, across the board, as needed basis, the Special School District of St. Louis County, Missouri, developed and implemented a vocational evaluation model under the title of Project SCAN (Successful Career Planning through an Assessment of Vocational Needs).

PROJECT DESCRIPTION

Project SCAN attempts to obtain objective information on each student in the areas of (a) manipulative skills, (b) physical characteristics, (c) work habits, (d) work attitudes, (e) interests, and (f) academic skills that are directly related to the world of work and independent functioning in society. An assessment of manipulative skills is critical in so far as the types of jobs typically obtained upon school completion often referred to as entry level jobs, are those demanding a degree of fine and gross motor ability. Physical characteristics are closely associated with motor skills as they reflect these abilities in tasks requiring stamina, endurance, and mobility. Studies indicate that the major reason handicapped individuals lose jobs is poor personal-social skills rather than any real deficit in job skills. SCAN assesses this trait by observations of work habits and work attitudes. Job placement is often arrived at by determining the availability of a job and fitting the student to the job.

An assessment of vocational interests can result in job placements which are consistent with the desires of the student and should result in a higher level of job motivation. Finally, in an attempt to match the student's abilities with the reading, writing, and arithmetic requirements of specific jobs, SCAN determines the functional performance of each student.

SCAN comprises a 2 to 3 week full day session with an open entry-open exit system. Students may enter at any time and return to their classrooms when it is determined that they have completed the evaluation. While

at SCAN each student is given a variety of work samples and simulated work tasks, including the commercially produced Singer, Valpar, and JEVS VIEWS systems. A number of evaluation instruments including the Purdue Pegboard, Bennett Hand Tool, Pennsylvania Bi-Manual, and other tests of the same nature are used to assess basic motor skills such as coordination, dexterity, and bilateral ability. Both teacher and parent conferences are held when the Final Report is written to convey the results to those responsible for implementing the identified alternatives. Followup of these students is conducted by means of a team approach using teachers, job placement consultants, and administrators.

VOCATIONAL EVALUATION

Vocational evaluation should be tied to the school system in a more closely aligned manner than rehabilitation agencies can provide. The career decision-making process for the handicapped is much more complex than merely waiting until the individual is legally of age and finding him or her a job. As with the general population, in order to make an appropriate career decision people need to know themselves--their interests, abilities, aptitudes, strengths, weaknesses, and limitations, as well as have some basic knowledge about careers. This alignment in a school system is best achieved by making use of the expertise of both the special education and vocational education personnel for joint programing.

SCAN is by no means an innovative approach. Many school districts throughout the country have initiated similar types of systems. The Council for Exceptional Children recommends the implementation of comprehensive vocational evaluation in all programs serving the handicapped. Sharon Davis and Michael Ward, in the Guide for Policy Development--Vocational Education of Handicapped Students (1978), devoted a complete section to vocational assessment and state that it should be a continuous process, with some aspects taking place in the elementary school. Students' abilities should be reevaluated frequently as they progress through the various stages of career preparation.

Vocational assessment of handicapped students should include as many of the following components as are appropriate for the individual:

- Review and update of all additional school related information, including medical, psychological, educational, and social data obtained during the special education evaluation.
- Administration of selected commercially produced and locally developed instruments to assess vocational aptitudes and interests.
- Use of work samples to evaluate potential for developing vocational skill.
- Observation and assessment of work behavior.
- Evaluation of hands-on skills in exploratory shops in the nine areas of vocational education identified by the US Office of Education.
- Use of individual counseling to verify the skills and interests identified in the evaluation process and to lead the student toward an appropriate career goal.

INDIVIDUALIZED EDUCATION PROGRAM

The outcome of this total process is the final report. This document should be concise, yet comprehensive enough to assist in the development of the individualized education program (IEP) in determining the most appropriate vocational placement.

At the completion of the SCAN report all available staff who might have significant input for the IEP are included in the staffing: classroom teacher, evaluator, job placement consultant, supervisor, and so

on. The final report generates a series of identified alternatives rather than recommendations. Recommendations are typically taken as definitive in nature and tend to terminate the discussion rather than initiate it. By using the listing of alternatives the evaluation staff is directing the IEP discussion toward an appropriate decision with all staff and the parents providing comment on the list. Frequent options include returning the student to the classroom for further prevocational skill development, placement in a skill training program, placement in a vocational-technical program, referral to an exploratory situation, referral to the Division of Vocational Rehabilitation for training or further evaluation, participation in work adjustment training, work-study programs, on the job training, or any other alternative available to the student and appropriate to his or her current level of functioning.

Vocational evaluation also supplies job placement personnel with objective information to share with potential employers of the handicapped. Strengths and weaknesses can be relayed in the terms used in the business or industrial setting rather than in the educational jargon.

SUMMARY

Some considerations are needed before the school system ventures into the vocational evaluation business:

1. The evaluation process has to be the result of a concerted effort by as many persons familiar with the student as possible.
2. The evaluation should not preclude any other prevocational/career education programing. It is an element of the total continuum and should be used to reinforce schooling, not to solely decide on which occupation to pursue.
3. The program cannot function without the cooperative expertise of special education and vocational education personnel. Territoriality on the part of either (or both) will only serve to shortchange the student and will not yield the best information possible.
4. The evaluation results can serve as a legal safeguard relative to determining the least restrictive environment within which the handicapped student can best be expected to achieve.
5. The implementation of such a program should be based upon specific operational policies. A commitment on the part of the district administration and staff is necessary if followup is to occur; otherwise the assessment is worthless.

The directive is clear: vocational evaluation is an essential element of the total career education continuum. The Special School District has made some significant gains through Project SCAN. Vocational evaluation is integral to the district's operation and is mandated in the consideration of appropriate vocational alternatives for the handicapped students of St. Louis County. Additionally, the marriage of special education and vocational education philosophies is supported and enhanced through efforts such as SCAN.

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PROJECT HIRE: A VOCATIONAL EDUCATION PROGRAM FOR TRAINABLE MENTALLY IMPAIRED ADULTS

Lynda Hudson
Sheila Shuler

Project HIRE (Help Individuals Reach Employment) is a comprehensive vocational education/career education program for trainable mentally impaired adults (20 to 26 years of age) in the southeast quadrant of Oakland County, Michigan. The program contains three major phases: (a) sheltered activities, (b) job training stations, and (c) community placement. Clients move through the phases based on their individual abilities.

The MEAD TMI/SMI Life Competency Curriculum (Oakland Schools, 1978) provides the Oakland Training Institute-Lamphere Vocational Education system with programmatic goals (Brolin's 22 competencies, Brolin, 1976) and the individual objectives necessary to aid each client in reaching those goals.

All of the 5,000 to 6,000 objectives in the MEAD TMI/SMI system have been integrated into the 22 competencies, matching each objective to the appropriate competency. This provides a system whereby all instruction leads to the ultimate goals set by the competencies. The system is complete as it contains educational objectives for specific skills, career awareness objectives, and community awareness objectives. The MEAD TMI/SMI Life Competency system provides direction, scope, and continuity of instruction. Its completeness allows for the individuality of each client served.

Furthermore, it provides an easily accessible and understood working document to assist special education personnel in selecting educational objectives as mandated by Public Law 94-142 (The Education for All Handicapped Children Act) for the individualized education program. The computerization of the system has allowed quick, efficient programing and cumulative achievement reporting on a yearly basis.

SHELTERED ACTIVITIES

The sheltered activities program uses work contracted from local businesses and brought into our facility. These jobs are in the areas of light assembly, packaging, sorting, inspection, salvage work, collating, binding, folding, and labeling. An effort has been made to obtain contracts that are somewhat complex so that clients can increase their manual dexterity and cognitive abilities. Contract bids are based on minimum wage and normal production rates.

Once a contract is obtained from an employer, each job is reviewed and a step by step task analysis is written. One hour training sessions are held with clients until they have reached the criterion of accuracy designated in the task analysis. The training method used is the one described by Gold (1972). Once the clients have reached the criterion of accuracy with the trainer, they are ready to begin production. The goal is to achieve normal production rates.

Production, in itself, is not sufficient to prepare trainable mentally impaired clients for employment. There are work related activities that are necessary on a job. Some of these are:

1. Punctuality. Clients need to attend work on a regular basis except for legitimate excused absences. Many students have attended school on an irregular basis and these habits carry over into a work situation. Punctuality includes being on time for work and returning on time from breaks and lunch. People who are trainable may have, in the past, not been held responsible for their actions and now must be taught to behave responsibly.
2. Working with others. Clients need to work with their peers and supervisors. They must also adjust to working with people they do not know well. Our clients have been sheltered from contacts with nonimpaired people. It is time to expose them to such people and to expect that the clients will be able to handle themselves.
3. Accepting supervision. Clients need to maintain a positive attitude about the people who supervise them. This is why exposure to a wide variety of supervisors is encouraged. It is fortunate to get along with one's supervisor, but workers need to also handle situations where there is a problem with a supervisor. Such problems may arise even more with a nonimpaired supervisor who might not understand impaired student's capabilities.
4. Maintaining production. This entails a client's consistent attention to the task and dealing with fatigue and boredom. Clients must be able to pace themselves to conserve energy.
5. Endurance on the job. Most clients are not accustomed to working the 8 hour day that is required in full time employment. For their first time on a job, an attempt is made to start out with fewer hours and gradually build up to the maximum hours. Jobs that require clients to be on their feet will exhaust them quicker.
6. Handling repetition. Contrary to popular belief, mentally impaired people are not able to do repetitious jobs any longer than nonimpaired people. Our clients do need variety in their jobs, but they must also be able to deal with repetition.
7. Appropriate work attire. Mentally impaired individuals are often ostracized because of their appearance. It is important that they learn to wear clothes that will blend in with the work situation. This requires work with the parents or their community living center.
8. Safety. Clients learn all safety procedures within the sheltered activities program. They become responsible for maintaining safe conditions in the workshop. A concern for safety does carry over into actual employment.
9. Independent work behaviors. Clients should be able to do some problem solving on the job, such as restocking supplies, checking for and recognizing their own errors, and correcting errors. If they are unable to solve a problem, they must ask for assistance.

Production Records

Daily production records are kept for each client. These production records include the following data: date, job, hours worked, total production, pay rate, and daily earnings. These production records can be used to prescribe a further course of action for each client.

The client's average hourly production can be determined and measured against normal production rates on the same job. For example, the average hourly production rate on the five step cam assembly for client A is as follows:

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
22/hr	18/hr	21/hr	22/hr	23/hr	27/hr

The average normal production rate, as obtained from the contract vendor, is 80 per hour. While client A has increased his production over time, it is still 30% of the nonimpaired worker's. Thus, we can honestly discuss the client's productivity in terms quickly understood by the prospective employer. The employer might be interested in hiring this client if a wage deviation or other agency contract could be arranged.

Production records can be used to narrow career area choices. Client B's production records on cam assembly are as follows:

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
25/hr	22/hr	33/hr	26/hr	28/hr	41/hr

Client B's production records and conversations with him on career choices indicate that he does not like or perform well on production type work. However, client B has successfully completed a building maintenance program at the area vocational high school and enjoys and would like to work in the area of building maintenance. He has subsequently been employed in a janitorial position with an area business.

Periodic review of the daily production records can also point out the areas in which a client needs more skill development. Client C's records on a simple two part assembly job are:

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
43/hr	160/hr	184/hr	118/hr	151/hr	166/hr

His production records on sorting screws for length and thread size are:

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
--	1#/hr	1#/hr	¼#/hr	1#/hr	1½#/hr

While client C is performing well on a simple assembly task, he definitely needs more work on skill development in sorting. Therefore, this client is given work on contracts which require sorting skills in order to increase his abilities in this area.

By reviewing the daily production records, the coordinator can estimate the amount of time it takes to train a client on a given job. Looking at client D's daily production per hour (days selected randomly) on a complex assembly task (six steps) we see:

Month/Day	
January 19	11/hr
January 23	14/hr
January 30	15/hr
February 1	22/hr
February 6	26/hr

After February 6 the hourly production begins to rise rapidly:

Month/Day	
February 8	32/hr
February 16	36/hr
February 23	40/hr
March 1	47/hr

It took client D approximately 12 days of training before she became competent enough to perform independently (met the set criterion of accuracy) and began a rapid rise in production. It must be noted that even during the training period, as her proficiency increased, training was decreased.

Production records as assessment can also assist the vocational education coordinator or teacher in determining the length of time needed for a client to reach normal production and can help determine when the client is ready for actual community employment.

Client E has been trained and has been producing an eight part cam assembly since September 1978. His monthly average production per hour shows:

Sept.	Oct.	Nov.	Dec.
18/hr	22/hr	58/hr	59/hr

Jan.	Feb.	Normal
62/hr	64/hr	80/hr

With training completed in October and his average hourly production

increasing, combined with his continued employment of assembly work, we have located a community employer in assembly and production work who is willing to hire client E. A review of his production records has helped us to determine that client E is ready for and should be successful in a community employment position.

Mainstreaming into Regular Vocational Programs

It is necessary to provide training outside of sheltered work activities in specialized skill areas such as building maintenance, nurse's aide/orderly skills, and restaurant skills. It is also extremely important that the training in these areas be done by experts in those fields.

Southeast Oakland Vocational Education Center (SEOVEC) serves as a vocational training center for the southewast quadrant of Oakland County. Clients who are ready for this type of specialized training are integrated into the regular vocational training programs at SEOVEC. At the present time, we have five vocational education clients enrolled: four in building maintenance and one in nurse's aide/orderly training. Clients attend a 2½ hour session daily and are trained on the actual equipment they will be using when they find employment. Two clients have successfully completed the building maintenance program and are employed in the community. The vocational education staff works with these clients to provide support materials and instruction to assist them in learning the specific skills. This kind of mainstreaming has been a very successful facet of the total program. Clients have been able to integrate themselves socially as well as academically into the SEOVEC program.

JOB TRAINING STATIONS

A job training station is defined as a community placement where a client is being trained on the job. Prior to placement, clients' interests and abilities are assessed on a profile sheet. Often it is difficult for our clients to verbally specify their career choices. When a potential placement is available, therefore, a job profile is written and matched to an appropriate client profile. The only accurate measure of how clients will do on a job, however, is to give them a chance.

Before placement, a conference is held with the client so that he or she can learn about the potential job, ask questions, and specify likes and dislikes. More often than not, clients will not discover any unfavorable conditions of a job until they are placed. Clients are led to understand that they do not have to like every aspect of their job and should the dislikes outweight the likes, another placement can be made.

Since the worker who is trainable mentally impaired takes longer to acquire skills necessary for a job, employers are offered financial assistance during the client's training period (US Department of Labor wage deviation, Comprehensive Employment Training Act, Vocational Rehabilitation, National Association for Retarded Citizens). Also, the vocational education coordinators can serve as on-site trainers.

When setting up job training stations, there are several factors to be considered:

1. Mix of different types of training opportunities, such as restaurant, convalescent home, factory (assembly and packaging), or janitorial should be provided. This allows clients to experience different types of training if they are not successful at one type of employment. If a client specifies an interest in a particular type of job, an attempt is made to set up a job training station in that area of employment.
2. Contact with employers must be done selectively. If an employer is coerced into taking on a trainable mentally impaired employee, it

could work to the client's detriment. Potential employers are approached on the basis that we are not asking for charity but for an opportunity to give them good, productive employees.

3. Transportation is a prevalent problem that must be worked out because most of our clients do not own an automobile or drive.
4. Selecting the correct client for a job should be based on the vocational education coordinator's knowledge of the client and the job. If a client does not succeed, employers are often willing to try another client if close followup has been provided by the coordinators.
5. In order to meet the requirements of the law, each client placed on a job must have an agreement signed by all parties involved in the training. Specific training objectives should also be developed.
6. Evaluation must be done on a regular basis so that the employer and employee have an opportunity to discuss any problems. This is also an assessment that tells when an employee is reaching normal production rates.
7. Followup by the vocational education coordinator is most important. In the beginning, the employer and employee need someone to serve as a liaison person. Eventually this gap is bridged and school personnel can fade out.

COMMUNITY PLACEMENT

Community employment in this program takes place when a client has completed training and is a productive employee of a business. At this point, the client still needs a minimal amount of followup. School personnel can be on call if any problems occur or retraining is needed.

Communication among employers becomes the best selling tool that a vocational education program can have. Employers who have contracted with the work activities program are enthusiastic about the quality of work and service received. Employers who have successful trainable mentally impaired employees are also willing to endorse the program. These people can be used to expand the field of potential employers in all phases of the program.

SUMMARY

Project HIRE successfully serves as a vocational education program for all levels of trainable mentally impaired adults. The ability to place clients among the three phases based on their individual skills and abilities gives the clients the freedom to move at their own rate.

We are extremely pleased with the success of our clients in the variety of work situations they find with Project HIRE. As we continue to raise our expectations, the clients continue to meet and surpass them--proving that with sound vocational programing these workers can take their place as productive, respected members of the community.

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MAINSTREAMING AND VOCATIONAL EDUCATION

Patricia Sullivan
Cynthia Creighton

Equal opportunity in education and employment has become a legal right of handicapped persons. Vocational education has been affected by federal and state legislation mandating accessible facilities, individualized education programs for handicapped students, and education services for handicapped persons in the least restrictive setting appropriate.

Even with legislative mandates, the integration of students with handicaps into regular vocational education has been slow. The California Advisory Council on Vocational Education (1977) published the following statement:

> Very few quality mainstreamed vocational education programs exist. Vocational training for handicapped persons is often short-term and low-level, and more challenging vocational education is frequently conducted in inaccessible places. (p. xv)

This lack of opportunity for quality vocational training is reflected in poor employment statistics for handicapped individuals. A survey conducted by the Social Security Administration indicates that one third fewer handicapped individuals are employed than other adults. Most employed handicapped people have only part time jobs and their average wages are significantly lower than those of other workers (Posner, 1978).

In an effort to assist educators in Michigan to develop quality mainstreamed vocational education programs, a mainstreaming model and instructional materials for implementing such have been developed. This model organizes mainstreaming in vocational education into three phases:

1. Phase I includes the educational activities that must take place before a handicapped student is placed in a vocational program.
2. Phase II is the development of a vocational individualized education program.
3. Phase III includes the educational activities that take place while the student is receiving vocational training.

Vocational educators, special educators, support staff, the student, and his or her parents have separate but coordinated responsibities during each of these phases. What follows is a chart and explanation for each phase.

PHASE I -- BEFORE VOCATIONAL PLACEMENT

Personal Adjustment Training

The purpose of personal adjustment training is to develop the personal and social skills required for daily living and work. It has two components: facilitating a positive self concept and work adjustment.

PHASE I -- BEFORE VOCATIONAL PLACEMENT

Educational Activity	Roles and Responsibilities	Suggested Materials Developed in Michigan
1. Personal Adjustment Training		
a. Facilitating positive self concept	All personnel help students learn to accept and value themselves.	None now available
b. Work adjustment	Special educators and support personnel teach students the attitudes and behaviors necessary in the world of work.	
2. Prevocational Education		
a. Exploration	Special educators, general educators, and support personnel provide career exploration activities for students. Vocational educators supply information about careers.	Career Related Instruction -- Exploratory Packages Vocational Education/ Special Education Project II -- Interest Scramble Survey
b. Assessment	Special educators, support personnel, and parents gather information about student skills as related to job requirements.	Vocational Education/ Special Education Project II -- Prevocational Enabling Skills Survey Materials Adapting Vocational Education for Handicappers -- Exploring Physical Skills Manual
c. Instruction	Special educators, general educators, and support personnel provide students with prevocational instruction and practice.	Career Related Instruction -- Prevocational Modules Vocational Education/ Special Education Project II -- Instructional Design Materials

Facilitating positive self concept. Having a healthy self concept can give a student the confidence and motivation he or she needs to succeed in the world of work (Technical Education Research Centers, 1977). It is the responsibility of all personnel who work with handicapped students to help them accept and value themselves and learn how to deal with the prejudice they may encounter.

Work Adjustment. Work adjustment activities teach students the attitudes and behaviors needed in the working world. Formal work adjustment programs are usually the responsibility of counselors or therapists. Special educators can also provide activities that help students learn how to work with other people and demonstrate responsibility in work situations.

No state supported instructional materials in the area of personal adjustment training have been developed in Michigan.

Prevocational Education

The purpose of prevocational education is to assist students in developing the skills, knowledge, and behaviors necessary for entry into vocational education. It has three components: exploration, assessment, and instruction.

Exploration. During prevocational exploration, students learn about occupational areas in relation to their own interests and values. Vocational educators are a good source of information for other professionals and for students exploring careers. They can supply information about the job duties, wages, working conditions, and opportunities for employment in their fields. Special educators, along with general educators, support personnel, and parents, should provide activities and experiences to help handicapped students determine which occupations are of highest interest to them. These materials were developed in Michigan to facilitate prevocational exploration:

1. Career Related Instruction Exploratory Packages. Ten packages, each including a filmstrip and tape and individualized learning modules, introduce students to jobs in the following occupational clusters:

   Agriculture/Natural Resources
   Automotive and Power Service
   Clothing/Textile Service
   Construction
   Distribution
   Food Preparation and Service
   Graphics and Communication Media
   Health
   Manufacturing
   Office and Business

   Audio tapes that read the modules and typed scripts for hearing handicapped students using the filmstrips, are available.
2. Vocational Education/Special Education Project II Interest Scramble Survey. Students rank pictures of people at work and are given a score indicating which occupational areas are most interesting to them. This survey can be used in conjunction with the Career Related Instruction Exploratory Packages.

Assessment. Students' job related strengths and weaknesses are determined during this component of prevocational training. This is an important step for students with physical disabilities, whose capabilities must be carefully compared with the physical demands of occupations. Special educators, support personnel, and parents are responsible for gathering objective information about student skills.

Two sets of materials providing methods and forms for prevocational assessment have been developed in Michigan:

1. Vocational Education/Special Education Project II Prevocational Enabling Skills Survey Materials. This survey identifies which of 160

social, physical, and intellectual skills students need to enter vocational training in each of the occupational clusters listed above. A checklist for recording which of the necessary skills a student has and which he or she lacks, is included.

2. Adapting Vocational Education for Handicappers. The physical requirements of 34 occupations were determined for this project through observation of workers. A manual titled Exploring Physical Skills provides a method for surveying a student's physical abilities and comparing them to job demands.

Instruction. In the third component of prevocational training students learn the psychomotor skills and academic skills necessary to broaden their range of opportunities in vocational education. Special educators and general educators are usually responsible for providing prevocational instruction to handicapped students. Therapists may provide activities and exercise to improve student skills. Prevocational instruction materials include:

1. Career Related Instruction Prevocational Modules. This is a set of student directed, individualized learning packets designed to teach special needs students about the vocational tools, terminology, and concepts used in the 34 vocational areas listed here:

   Agricultural Mechanics
   Landscaping and Nursery
   Greenhouse/Floriculture
   Forestry and Recreation

   Auto Mechanics
   Auto Body Repair
   Small Engines
   Appliance Repair
   Air Conditioning

   Clothing Service
   Clothing Construction
   Home Furnishings
   Upholstery

   Building Maintenance/Service
   Residential Construction

   Material Handling
   Retailing

   Baking and Pastry
   Food Preparation
   Food Service

   Bookbinding
   Screen Printing
   Offset Lithography
   Letterpress Printing
   Commercial Photography
   Drafting

   Health Care
   Hospital Housekeeping
   Child Care

   Combination Welding
   Machine Tool Processes
   Soft Material Processes

   General Office Clerks
   Office Machine Operators

   The modules are written at a third to fourth grade reading level, and audio tapes are available for students who are unable to read.

2. Vocational Education/Special Education Project II Instructional Design Material. These materials provide ideas for teaching the social, physical, and cognitive skills identified in the Vocational Education/Special Education Project II Enabling Skills Survey Materials.

PHASE II -- DEVELOPMENT OF VOCATIONAL IEP

Plan Vocational Individualized Education Program

The success of a vocational education mainstreaming program depends to a great degree on the development of realistic and meaningful IEP's for handicapped students. Cooperation between and among special educators, vocational educators, support

PHASE II -- DEVELOPMENT OF VOCATIONAL IEP

Educational Activity	Roles and Responsibilities	Suggested Materials Developed in Michigan
Plan Vocational Individualized Education Program	Special educators, support personnel, and parents share relevant information about student. Vocational educators share information about occupations, discuss concerns related to teaching handicapped student. All personnel write plan for student's vocational training.	Adapting Vocational Education for Handicappers -- Program Planning and Placement Manual

personnel, and parents is crucial in this phase. Vocational IEP's should be written in a meeting attended by representatives from each of these groups.

During an IEP meeting, special educators are responsible for sharing relevant information about the student's occupational interests and academic, social, and physical skills; the causes, degree, and stability of his or her conditions as they would affect safety in a vocational classroom; and the adaptive devices and equipment used by the student. Counselors, therapists, and parents can also contribute valuable information.

Vocational educators are responsible for sharing information about their occupational programs. This may include information about the entry level academic, social, and physical skills required and the performance objectives for the program.

As a team, participants should discuss the following questions and record their answers in the form of a written IEP:

1. What vocational programs are appropriate for this student?
2. What problems might there be?
3. How can classroom and work environments be adapted to facilitate mainstreaming of the student. Can jobs be broken down, equipment modified, teaching methods changed?
4. What resources are available for help in modifying vocational programs?

The materials below were developed to assist educators in planning and recording vocational IEP's:

1. Adapting Vocational Education for Handicappers Program Planning and Placement Manual. This manual contains IEP planning forms and directions for using them. One form is provided for vocational educators and one for special services personnel, to be completed before an IEP meeting takes place. A third form is used to record the placement decision, educational goals and objectives, and teaching plan developed by the group at a vocational IEP meeting. The manual also contains ideas and guidelines for making adaptations in vocational programs for students with physical handicaps.

PHASE III -- AFTER VOCATIONAL PLACEMENT

Vocational Education

Vocational education is designed to

PHASE III -- AFTER VOCATIONAL PLACEMENT

Educational Activity	Roles and Responsibilities	Suggested Materials Developed in Michigan
Vocational Education		
Skills Training	Vocational educators teach students the skills, knowledge, and behaviors they need for entry level jobs. Special educators and support personnel assist vocational educators in modifying vocational instruction to meet student's special needs.	Capital Area Career Center -- Vocational Modules Vocational Education/ Special Education Project I Materials Adapting Vocational Education for Handicappers -- Occupational Manuals
Support Instruction	Vocational educators inform resource personnel about student's progress and what support instruction is needed. Special educators, general educators, and support personnel provide the vocational support instruction requested.	Capital Area Career Center -- Occupational Math, Measurement and Reading Support Programs Career Related Instruction -- Prevocational Modules
Pre-employment	Support personnel, special educators, and general educators teach student skills needed for seeking, getting, and keeping a job.	Capital Area Career Center -- Pre-employment Skills Program

provide learners with the necessary skills for entry into chosen occupations. It has three components: skills training, support instruction and pre-employment.

Skills Training. This is the main focus of vocational education. Students are taught the vocational skills, knowledge, and behaviors they need for entry level jobs in specific occupational areas. Vocational educators are responsible for providing direct instruction to handicapped students. Special educators, therapists, and vocational rehabilitation counselors are responsible for helping instructors when problems arise and when modifications in materials, methods, or the classroom environment are needed. Three sets of materials developed in Michigan deal with vocational skills training:

1. Capital Area Career Center Vocational Modules. Individualized vocational instruction modules written at a low reading level are available for 81 occupations in the following clusters:

   Secretarial and Clerical
   Bookkeeping and Accounting
   Data Processing
   Graphics-Visual Communications
   Building Maintenance and Engineering
   Heating and Air Conditioning
   Electronics
   Medical Laboratory
   Food Service Program
   Health Service
   Welding
   Machine and Tool Operations
   Retailing
   Business Service
   Parts Control Department
   Auto Body
   Auto Mechanics
   Small Engine Repair
2. Vocational Education/Special Education Project I Materials. These materials contain instructional guides for the 10 clusters of occupations listed under the Career Related Instruction Exploratory Packages in Phase I. These are to be used cooperatively by vocational and special educators. The guides include lists of entry level skills and performance objectives for jobs in each cluster and list the terminology and concepts that the student must learn to perform vocational tasks.
3. Adapting Vocational Education for Handicappers Occupational Manuals. Manuals have been developed for each of the 34 occupations listed under the Career Related Instruction Prevocational Modules in Phase I. They contain suggestions for modifying vocational teaching methods, equipment and facilities, and tasks for students with physical handicaps.

Support Instruction. Support instruction is designed to provide assistance to students in the areas of math, measurement, and reading as they relate to occupational training. Vocational educators should communicate with appropriate personnel about students' needs in these areas. Support instruction is usually provided to handicapped students by general or special educators. Suggested materials include:

1. Capital Area Career Center Occupational Math, Measurement and Reading Support Programs. The three programs are individualized and self instructional. They teach students the math, reading, and measurement skills needed in specific occupational areas.
2. Career Related Instruction Prevocational Modules. These materials, discussed under "Prevocational Instruction," can also be used to support vocational instruction.

Pre-employment. A complete vocational program for any student should include training in finding, securing, and keeping a job. Skill in writing resumes, interviewing, and dealing with supervisors and fellow workers is especially important for handicapped

students who may encounter discrimination in the job market. Preemployment skills may be taught by counselors, general educators, or special educators. The following materials were designed to assist in this instruction:

Capital Area Career Center Preemployment Skills Program. This program teaches job seeking skills through individualized instructional modules and through practice with other students and adults.

Mainstreaming in vocational education is a complex process. The activities, roles, and materials described in this chapter are designed to make the process more feasible and workable. All materials listed (except Adapting Vocational Education for Handicappers which is now being pilot tested) have been successfully used in Michigan for at least 4 years.

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PART IV

Counseling and Career Information

VALUES CLARIFICATION APPROACHES TO CAREER COUNSELING OF EXCEPTIONAL INDIVIDUALS AND THEIR PARENTS

Ted Smorodin
Judith H. Freund
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As can be seen from the following definitions, a major problem in working in the values field is a lack of consensus about what we are working with.

> Values are the same as needs. Eight categories of needs have been suggested: respect, affection, skill, enlightenment, influence, wealth, health, responsibility. (Lasswell, 1930)

> A value is a stance taken in response to the total environment: it enhances the development of the human personality and its creative integration. (Hall, 1976)

> A value is the result of the valuing process which consists of the following steps: Choosing... freely and from alternatives and with knowledge of the consequences; Prizing...publicly and happily; Acting...doing it repeatedly. (Raths, Harmin, & Simon, 1966)

There are, however, some areas of agreement. Values are what a person considers important in life. They determine beliefs, actions, and commitments to self, family, group, society, or nation. Values education provides the student with alternatives for analyzing and exploring from a different perspective. It enables students to gain sensitivity to moral and value issues and provides them with strategies for clarifying values and making value judgments. If there is an ultimate value, it is to move beyond the level of moralizing and indoctrination to a process of personal value clarification on the part of each student.

The role of the teacher is to create an atmosphere in which students can share their feelings, ideas, and beliefs with both classmates and teacher. Students should be able to express themselves freely and realize that in discussing value issues there are few absolutely right or wrong answers. In order to build a safe atmosphere, the teacher should offer warm support to all students and show a sincere interest in listening to the comments of students.

Values education is a personal, developmental process. Each student must be allowed and encouraged to validate his or her own value system by participating in activities that emphasize independence of decision making, careful consideration of alternatives and consequences, and willingness to stand up for and live in accordance with personal beliefs.

In valuing, one makes choices and acts upon them. There are few areas in which an individual's values have greater lifelong consequences than in his or her selection of a career. The purpose of this article is to acquaint the reader with values clarification approaches which can be used in assisting exceptional individuals with career decision making.

STRATEGY NUMBER 1: THE CIRCLE DIAGRAM

Over the years a set of value clarification activities has been developed. These activities have applicability to career decision making and adaptability for use with exceptional individuals. The activity presented in Figure 1 is called the Circle Diagram. It is illustrated as a career related example.

The first step is to have students draw a simple diagram consisting of circles, arrows, and boxes to represent some conflict that the student has had in the last few months. The conflict can be focused in any area, but for this example, it will be assumed that the conflict is job related. Circles are used to represent people, boxes represent institutions, and arrows, represent the direction of the conflict. The distance between circles/boxes can be used to represent the felt social distance between the actors, and the size of the circles/boxes can represent the felt power dimension. Figure 1 illustrates a simple conflict.

In this conflict, the circle in the box represents the boss and the circle with the star is the student, while the other circle is another worker. The diagram represents a conflict between two workers. The boss, who in this case was felt to represent the institution, criticized the student, who evidently felt this was unfair. The size and distance relationships are evident in the diagram.

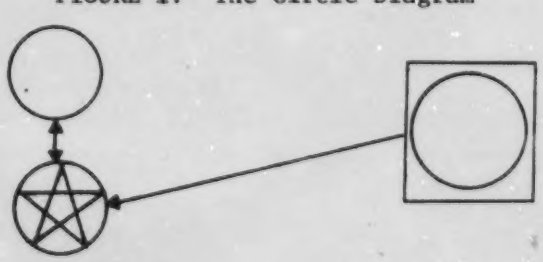
This exercise is usually conducted in groups. Four or five students is an ideal number for a one hour session. About five minutes should be allowed for drawing the diagram. Then one of the students can show his or her diagram and explain it to the others. A short question and answer session follows to insure that each member of the group thoroughly understands the conflict and the actions that occurred.

The next step is to use a values sheet -- a list of values that has been used in previous activities. If this is the first time that a values clarification exercise has been used, the teacher should hand out the list before starting, explaining any of the words that might be problematic. Table 1 illustrates an example of a values list. Any adaptation that will suit the students can be used.

Using the values list, the other students suggest values that might have been operating in the conflict. The individual students can accept or reject these values explaining the reasons for doing so. After five or six values have been accepted, listed, and defined, the student is asked to prioritize the listed values by assigning the numeral 1 to the most important, 2 to the next, and so forth. The students are then asked to weight the choices, thus establishing the relative importance of each value. For example, if harmony, truth, and security were chosen, prioritized, and weighted as in Figure 2, it might mean that all three values were important in the conflict.

The process is repeated until all participants have had a chance to describe, list, define, rank, and weight the values operating in their conflict. The values are thereby

FIGURE 1. The Circle Diagram



clarified and examined. The steps in the exercise are reviewed in Figure 3.

More advanced students can carry the exercise further, as illustrated by steps 5,6, and 7 in Figure 4. By examining their values more closely, some may decide that they do not like the values under which they operate in a conflict situation. Using their peer group as a sounding board, they can choose different values, different priorities, and/or different weights. They can then try out these new values in a role play situation, using the group as participants and observers. This strategy helps people practice new techniques for dealing with conflict using new value clusters.

Adaptations for Exceptional Individuals

Circle Diagrams can be adapted for exceptional individuals in many ways. Facilitators can be used to make the drawings for the students. Some reduction of the abstractness of the drawing can be accomplished by using stick figures or faces for the people involved. The teacher might decide to use only circles (or individuals) and forego the idea of representing institutional relationships. The concepts of social distance and power can be eliminated, or the facilitator might include these concepts in the drawing without mentioning them at first, leaving discussion of them until the question and answer period. The teacher can shorten or alter the values list and

TABLE 1. Values List

Self Worth	Self Direction	Order
Community	Sex (Experience)	Power
Food/Warmth	Self Control	Affection
Harmony	Friendship	Education
Intimacy	Empathy	Interdependence
Recreation	Discovery	Service
Self Preservation	Congruence	Cooperation
Work/Labor	Equity/Rights	Learning/Insight
Relaxation	Law (Guide)	Simplicity
Solitude	Knowledge/Insight	Equilibrium
Prestige	Self Assertion	Honesty
Truth	Wonder (Curiosity)	Human Dignity
Being liked/appreciated	Health (Personal)	Family
Achievement/Success	Creativity	Beauty/Arts
Justice	Security	Competence

use a colorful flannel or poster board to make the diagram.

Circle diagrams can be employed with individuals having a wide range of exceptional conditions. The preceding suggestions are relevant to use of the strategy with educable mentally retarded and mildly handicapped learning disabled individuals. The gifted and talented can use the strategy as it was originally described, but may be expected to modify it to suit their own creativity and divergent thought processes.

Individualized or semi-individualized administration is recommended for severely behaviorally disordered adolescents who may sometimes display overt verbal aggression toward supervisors, teachers, coworkers, and fellow students. The hearing impaired can use this strategy through diagrams and charts supplemented by manual, oral, or total communication discussion. Visually impaired individuals can engage in the basic values conflict analysis through primarily verbal means, reinforced by manipulatable tactile representations, where appropriate. Finally, cerebral palsied youngsters who are incapable of oral speech can attempt these exercises on communication boards, with the assistance of a facilitator who constructs the diagram for them.

FIGURE 2. Prioritizing and Weighting Values

Rank	Value	Weight
1.	Security	100
2.	Truth	95
3.	Harmony	90

STRATEGY NUMBER 2: "I VALUES" VERSUS "JOB VALUES"

The Career Alternatives Project (CAP) at the Special School District of St. Louis County, Missouri (Muenster, Remaklus, et al., 1977) has developed a values clarification strategy which helps exceptional individuals identify the differences between their values (as inferred from their on-the-job conduct) and their employing institutions' values (as implied by company regulations and employees' counseling reports). Another way to get at "I Values" is to refer back to the circle diagram strategy, or to simply go through the value list in Table 1 and have students discuss their values. Any other values clarification techniques will also yield some information about student values. An excellent source book for this type of materials is Values Clarification (Simon, Howe, & Kirschenbaum, 1972).

Figure 4 contains a sample employee counseling report which the CAP staff obtained from a large manufacturing firm.

In order to use this employee counseling report (or an adaptation thereof) with special education students in work-study or distributive education programs, the counselor should have the student's supervisor fill out the form and discuss the student's ratings. How does the student's behavior correspond with the type of performance the company values? Is there a serious discrepancy between the student-worker's "I values" and the employer's "job values"? What types of values are generalizable to virtually all employer/employee situations? What sort of values are especially essential or even job specific to particular occupations?

By means of such values clarification in career counseling, it is possible to assist exceptional individuals to address social issues which are highly relevant to career success. As Kokaska (1968,1978) and the President's Committee on Employment of the Handicapped (1974) have pointed out, there is a strong data base to suggest that job failures of handicapped workers are more strongly associated with social factors than with deficits in actual work skills. It can be argued that appropriate values are essential to career success and that, therefore, values clarification is a necessary component of all career education programs. Further, values clarification is particularly

important in the career education of exceptional individuals, who often exhibit social disabilities as well as learning disabilities.

PERCEPTION BASIS OF VALUES CLARIFICATION

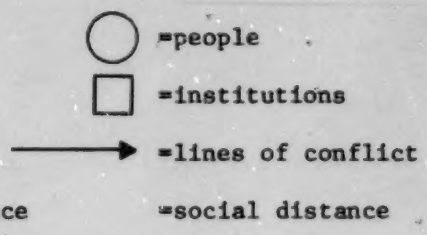
Values clarification is an appropriate supplement to, although certainly not a replacement for, traditional vocational and prevocational guidance techniques such as psychometric testing, job-task sampling, and performance and task analysis -- all of which are useful means of assessing an exceptional individual's present and potential competencies.

Values clarification differs from much of special and career education in that it is perception based rather than competency based. Values clarification thus enables the exceptional individual to ascertain and refine goals and preferences which interact with skills and competencies. Values clarification is an adjunct to skill assessment and an integrative process which assists the exceptional individual in coordinating knowledge of what he or she can do (skills) with understanding of what he or she wants to do (values), in choosing among realistic career alternatives.

It is not uncommon for exceptional individuals to experience confusion and difficulty as they attempt to correlate abilities, interests, and

FIGURE 3. Steps in the Circle Diagram Exercise

1. Draw diagram.



2. Explain diagram to group. Hold question and answer session.
3. Choose values. In conflict diagram, accept and define.
4. Prioritize per conflict/share/weight.
5. Make decision regarding acceptance of priorities.
6. Reprioritize values in conflict.
7. Role play new priorities.

FIGURE 4. Employee Counseling Report.

(Complete in triplicate. Send original and one copy to Personnel, retain one copy).

Written Warning ☐ Final Written Warning ☐ Discharge ☐

1. ( ) Abusive or threatening language
2. ( ) Carelessness
3. ( ) Destroying or defacing property
4. ( ) Falsification of records
5. ( ) Fighting
6. ( ) Gambling
7. ( ) Horseplay
8. ( ) Insubordination
9. ( ) Disrupting operations
10. ( ) Reporting in unfit condition
11. ( ) Ringing another's timecard
12. ( ) Sleeping on duty
13. ( ) Solicitation
14. ( ) Stealing
15. ( ) Possession of weapons, drugs or alcohol
16. ( ) Abuse of break or lunch periods
17. ( ) Being in unauthorized area
18. ( ) Dishonesty
19. ( ) Dress - Grooming
20. ( ) Leaving premises
21. ( ) Violation of safety rules
22. ( ) Excessive absenteeism
23. ( ) Tardiness
24. ( ) Unreported absence
25. ( ) Unexcused absence
26. ( ) Job performance
27. ( ) Other:

On other side, set forth all facts surrounding this counseling.

opportunities. Intellectually handicapped persons might have an interest in a particular area but find that the range of job opportunities for which they are mentally capable is limited. Visually and hearing impaired persons might find that there is a broader range of careers for which they are intellectually qualified, but encounter obstacles in obtaining the education necessary for job preparation. Physically handicapped individuals might find material barriers that limit their vocational choices.

CLARIFYING PARENTAL VALUES

If the restriction in career opportunities is problematic to handicapped individuals, it is sometimes traumatic to their parents. Parents of handicapped individuals normally experience a sense of loss over their offspring's reduced capabilities, which represents the parents' loss of a child with normal potential (Cansler, Martin, & Valand, 1976). Highly intelligent, highly achieving parents of mentally retarded children generally experience this sense of loss with particular intensity. Professionals engaged in career education for exceptional individuals have a profound responsibility to clarify the values and aspiration levels not only of students and clients, but also of their parents and siblings.

In normal children, parental aspiration levels are associated with children's academic achievement (Bloom, 1964; Dave, 1963) and in handicapped children, parental values and encouragement techniques are associated with children's social competence. In a study conducted with learning disabled children and their parents, Freund and Elardo (1978) found that parents who valued social skills and who encouraged their learning disabled offspring to perform useful work in the home that contributed to the welfare of other family members tended to have offspring who, relative to other learning disabled children, possessed superior interpersonal competencies.

Parental pressures for social development, academic achievement, and career satisfaction are powerful variables which require professional attention. As was pointed out earlier, social variables are particularly important to the long term vocational success of handicapped persons. Yet parents of handicapped persons sometimes have value hierarchies associated with job status. Such parents might feel that an office worker is more valuable than a cafeteria employee, who in turn is more valuable than a janitor. It is necessary to help these parents reassess their own career values so that they can learn to value all work and to give higher priority to the worker's job satisfaction than to job status. Only then can such parents assist and support their children in the selection of appropriate vocations in which success and satisfaction can be experienced.

If handicapped individuals and their parents sometimes find that they must narrow their interests in order to match limited abilities, gifted students and their parents have an opposite adjustment to make. Gifted students have multiple talents that must be focused in order to parallel specific career choices. Gifted individuals are often thought to be so advantaged by their talents that they do not experience problems in making career choices. However, it has been found that they are more like their peers than unlike them in many areas including career awareness (Barbe & Renzulli, 1975). For all exceptional individuals, then, gifted and handicapped, and for their parents, values clarification can provide a significant contribution to career education. Values clarification approaches which are based upon trust, understanding, and suspended judgment -- and upon the belief that if children are taught a process of valuing they will choose wisely -- are an attempt to help exceptional individuals meet the demands of a changing and evolving world of work.

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A SELF HELP CAREER PLANNING PROGRAM FOR THE BLIND

Robert Reardon
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Arthur Carlson

People who are blind are limited in their opportunities to explore occupational information for career planning in a self directed way. The nature of the disability limits the casual observation of people performing their jobs and thereby robs the blind of much vicarious career exploration. In addition, many people, including professional counselors, try to protect handicapped persons from exploring occupational interests in areas where they might fail or become unemployable.

Coker (1974) has indicated that blind students are tracked from an early age to prepare them for stereotyped occupations. Best (1974) surveyed graduates of residential schools for the blind and found they recommended the following changes: "More independence of movement, more vocational, academic and other decision making opportunities, uncensored information services, and the opportunity to make mistakes and profit from them" (p. 109). Vocational rehabilitation counselors are often taught and encouraged to perform career planning for their clients.

> To move a client along in a vocational counseling process, the counselor has at his disposal certain counselor-action variables. He can, for example, provide a climate, advise a client what to do, selectively reinforce desired behavior, use suggestion, or structure and manipulate environmental conditions. . . . It is elementary to state that the next big problem is that of knowing what vocational choices are the desirable ones for the client. Which choices hold the most promise for work adjustments? What choices would be best for him to make? (Lofquist, 1969, p. 219).

Wacker (1976), Ginzberg (1971), and Wright (1969) have decried public and professional attitudes that assume that blind persons are incapable of rational career exploration and choice and that promote career stereotypes for them such as darkroom technician, computer programer and so on.

Wurster (1975), Coker (1974), Stocker (1974), and Carroll and LaBarre (1974) have reported on the development of new career education programs which stress developmental career exploration and planning for blind students. In addition, published materials such as Career Planning for the Blind (Crawford, 1966) and Career Information and Training Activities for the Blind (Swearingen & Mosley, 1975) are designed to facilitate career planning. Recent federal legislation (Public Law 94-142 and Section 504 of Public Law 93-112) mandates that disabled students have available to them the same educational opportunities as nonhandicapped students. In addition, career education for handicapped students is designed to provide all students with opportunities to learn about and prepare for work based upon their interests and capabilities (Davis & Weintraub, 1978).

The purpose of this paper is to

report the experience of one institution in developing and evaluating a self directed career planning program for the visually disabled. With grant support provided by the US Office of Career Education, the project sought to meet the following objectives:

1. To increase the amount of occupational information available to visually disabled persons.
2. To provide resources for the blind to increase their decision making skills.
3. To provide visually disabled students with the opportunity for self assessment and help them identify occupations or fields of study for further exploration.
4. To provide opportunities and resources for learning employability skills.

BACKGROUND

The self directed career planning project grew out of an effort to make the materials in the career center at Florida State University, the Curricular-Career Information Service (CCIS), more accessible to blind and other handicapped students. CCIS is an outreach, self help oriented, multimedia based, instructionally designed career center (Reardon & Domkowski, 1977; Reardon & Minor, 1975). CCIS is based on the assumption that most people, especially those with an adequate sense of self concept who are given proper resources, can process educational/vocational information, make rational career plans, assess their own skills and interests, and conduct an effective job campaign. Extending this uncommon program assumption to the visually disabled was the mission of the project.

Much of the early planning for the project grew out of discussions among CCIS staff members and a group of 12 blind students at the university. Some of these students were very dissatisfied with the traditional counselor centered career guidance they were receiving. The students were primarily interested in having CCIS employability skills materials put into braille and large print, but they also wanted the same opportunity as their sighted counterparts to engage in academic and career decision making on their own.

After the federal grant was secured, the project staff identified four tasks:

1. To transcribe visual media into formats accessible to the visually disabled and purchase additional materials where possible.
2. To adapt Holland's Self-Directed Search (1977) into a format that would enable the blind to take, score, and interpret the instrument.
3. To catalog audio career information tapes in a manner that would allow easy access by blind students.
4. To evaluate the outcomes of the program in relation to stated goals.

TRANSCRIPTION AND ORGANIZATION OF CAREER INFORMATION

There were over 500 separately cataloged topics of information in CCIS and more than 1,500 additional brochures, clippings, and briefs filed in folders. There were also 10 modules providing a structured way to use materials in CCIS: CCIS Introduction; Guidelines for Career Decision making; Self Assessment; Career Information Sources; Linking Education and Work; Employment Outlooks: Career Planning for Black College Students; Career Decision Making for Adult Women; Employability Skills; and Campus and Community Resources.

We decided to use audiocassette tapes because putting all of these materials into braille would have taken too much space in the center and many blind persons do not read braille. Since CCIS already had over 100 different careers on tape, the plan was to add as many new tapes as space, time, and funds would allow. Most of the new career tapes added required

a college degree, but in selecting other new career tapes we also used a table of the 35 largest occupational clusters which cumulatively employ over 50% of the US work force. The major source of information for the tapes was the Occupational Outlook Handbook (DOT) (US Department of Labor, 1965, 1966).

We also recorded several career planning books, with publishers' permission. Since we could not tape each of the 30 relevant books, we selected the three titles most frequently stolen from CCIS.

We made an effort to include careers for which the blind might not be well suited. Regulations for Section 504 of the Rehabilitation Act of 1973 prohibit withholding information because of a handicap. Moreover, CCIS is based on the assumption that good career plans are possible only if many sources and kinds of information are explored. Finally, in our efforts to develop occupational information we discovered that there are blind artists, physicians, meterologists, funeral directors, medical technicians, nuclear physicists, and so on. It seemed that each time we thought we had found a job blind persons could not do, we found a blind person doing that job.

It should be noted that various church and service organizations donated materials and audio recording equipment worth several thousand dollars. Students enrolled in a speech course read occupational briefs used in making many tapes. Studio recording space was provided by the Counselor Education Department. Finally, valuable consultation and assistance was provided by state and local public service agencies serving the blind.

A major purchase was the Occupational Information Library for the Blind produced by the Greater Detroit Society for the Blind for $110. This library of 35 nineteen minute tapes describes approximately 600 different jobs that are successfully performed by blind men and women.

THE SELF DIRECTED SEARCH

Our experience working with blind students suggests they are very suspicious of psychological tests. They claim the results are inadequately interpreted and that counselors use the results to make decisions about their future education and careers without their participation. Given such perceptions, we had to develop an assessment device that could be completely controlled by the consumer -- the blind student.

The Self Directed Search (SDS) was already being used in CCIS, but was only available in printed form. The problem was solved by designing a tactile answer board with small pegs for keeping score. The boards are labeled in large print with clear plastic braille labels placed over the print labels. Limited experience with the tactile board version of the SDS indicates that blind students have positive reactions to the SDS similar to those of sighted students (Barker, 1978; Barker, White, Reardon, & Johnson, in press).

Blind students completing the SDS could use the results immediately. The three letter code produced by the SDS generated a list of occupational titles with Dictionary of Occupational Titles (1965) classification numbers. The career tapes produced by CCIS or purchased elsewhere provided more than 650 different occupational descriptions, each with its own DOT number. Blind students were quickly able to locate career information of interest to them by using the large type or braille labels on the tapes.

CAREERS TAPE CATALOG

A large type and braille alphabetical catalog was created in order to help students move immediately into exploring information about career alternatives without first completing the SDS. This catalog enables students to locate occupational information from either tapes produced by project staff (arranged according to DOT number) or the tapes provided in the Occupational Information Library for the Blind (arranged according to OILB numbers).

EVALUATION

The final project report (Reardon, White,

Barker, & Carlsen, 1978), available through Educational Resources Information Center, presents a complete description of the purposes, procedures, instruments, data, and results of the evaluation of this project. In this section we will present some of the most salient outcomes of the project.

The adapted Self Directed Search instrument was evaluated in both formative and summative phases. The former consisted of one-to-one administration, technical review, and pilot testing of the adapted SDS. The summative phase consisted of a field test of the SDS with 26 blind persons. Evaluation findings revealed that the revised SDS was effective in (a) increasing the number and consistency of occupations under consideration; (b) decreasing the need for general information about self and occupations; (c) increasing certainty and satisfaction about vocational plans; (d) increasing vocational information seeking behavior; (e) promoting the ability to apply Holland's (1977) theory; and (f) eliciting positive user evaluations. These results suggested that career guidance instruments and materials designed for the general population can be adapted for special populations without reducing their effectiveness. They also suggest that visually disabled persons can assume more control over their career planning if given the opportunity.

The entire program of materials designed to facilitate self directed career planning for the visually disabled was field tested in CCIS at Florida State University and the Rehabilitation Center for the Blind in Daytona Beach, Florida, following development and evaluation of the modified SDS. A total of 16 visually disabled persons completed the user evaluation form after participating in the program. The majority of users found the career materials easy to locate (81%), current (75%), and helpful (88%). Most, 81%, were pleased with the services offered by the program, 50% were overwhelmed by the volume of materials available, 94% would recommend the program to a friend, and 31% felt that obtaining relevant information from the materials was too time consuming.

Documentation of impact and exportability was provided by four rehabilitation counselors at the Daytona Beach Rehabilitation Center. They spent an average of two months reviewing the program. These reviewers unanimously agreed that (a) the program enabled blind persons to participate actively in career planning; (b) participants seemed interested in the materials; and (c) exposure to the program prompted further career planning behavior. The majority of the reviewers agreed that the program was acceptable in overall appearance, organization, potential usefulness of content, estimated ease of use, quality of writing, quality of content, and use of directions and instructions within the materials. Reviewers expressed concern, however, with the appropriateness of the reading level for those with less than a college education and noted the need for more detailed job descriptions on the audiotapes.

The small number of users participating in the spring and summer field test of the program was disappointing. Several problems contributed to this situation:

1. The self directed nature of the program made it difficult to get user evaluations on all components of the program.
2. The time for field test data collection occurred during the late spring and summer terms when enrollment was at its lowest at both institutions.
3. It was difficult to locate a large intact group of blind persons in one geographical area who needed or wanted to use such a program.
4. Completion of the self directed career planning program and evaluation instruments required

a time commitment from students which was difficult to obtain, especially considering the students' busy schedules.

Further evaluation activities should provide for a longer, more extensive time period for evaluation of user outcomes. In addition, more users need to participate in the program in order to assess its effectiveness. Additional research should include greater professional staff involvement in order to document the impact of a program like this one.

IMPLICATIONS AND CONCLUSIONS

Self help career planning for the blind can become another part of a comprehensive career education and vocational rehabilitation services system. Handicapped persons are too frequently guided toward occupational stereotypes by well intentioned friends and helpers. But it is apparent that the handicapped can assume more responsibility for the direction of their career planning, if they are properly motivated and if the necessary resources are available to them. When this begins to occur more frequently, perhaps visually disabled persons, like most nonhandicapped persons, will be able to seek work compatible with their interests and aptitudes. Having fully explored -- in an uncensored way -- self assessment, occupational information, decision making, and employability skills materials, disabled persons can use their counselors and other helpers as resources rather than crutches.

Blind persons who are already working in various jobs can provide invaluable information for other blind persons exploring the world of work. Counselor energies previously spent exploring occupational and employability skills information and assessing client aptitudes, interests, and competencies for handicapped persons can be expended more on counseling and on coordinating services. Handicapped persons can have more of the same opportunities as their nonhandicapped counterparts to assume increased control over and responsibility for their careers. The program described in this article represents one step in this direction. More steps are needed in the form of research and evaluation with other handicapped and special groups to explore the adaptability of existing programs and to develop innovative materials to provide those groups with the same involvement and participation in career planning and decision making as nonhandicapped persons now enjoy.

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THE ROLE OF COUNSELING AND GUIDANCE IN FACILITATING THE CAREER EDUCATION NEEDS OF THE HANDICAPPED

John W. Atlas
Harold Weiner

Large amounts of energy and resources have been expended to develop and implement career education programs. In spite of this, the career education needs of handicapped individuals have been neglected. The skills necessary for life/work survival remain essentially the same for all students. Therefore, it is necessary that all students be exposed to career education experiences.

Counseling and guidance personnel have an important role to play in the career educational process. This paper delineates those features of guidance and counseling services that have direct relevance for handicapped students. The discussion focuses on counseling and guidance definitions, the role of the counselor in regard to career counseling, and guidance consultation services with goals for consulting with individuals in educational and community settings. In addition, it discusses strategies school counselors employ in disseminating career information and evaluating product and process outcomes.

COUNSELING AND GUIDANCE IN PERSPECTIVE

School counseling and guidance are support services. While teachers are concerned primarily with the academic development of students, many authorities agree that social and emotional development are equally as important as academic development. Moreover, social and emotional maladjustments can have deleterious effects on academic development. Thus, a main objective of counseling and guidance is to facilitate healthy social and emotional development of students thereby having a positive impact on academic development.

Counseling Defined

Counseling is an interaction process involving a skilled professional (counselor) and an individual (counselee) needing or seeking help. The counselor helps the counselee in: (a) coping with or changing an undesirable condition or situation; (b) making decisions and solving problems, and (c) learning decision making and problem solving skills (Brammer & Shostrom, 1977; Dimick & Huff, 1970; Krumboltz & Thoresen, 1976; Muro & Dinkmeyer, 1977).

Guidance Defined

Guidance is a process of collecting, evaluating, and disseminating career and educational information by a competent professional. It also includes evaluation through specific testing, referral for special services or placement, and advising (Arbuckle, 1966; Borow, 1973; Dimick & Huff, 1970; Tolbert, 1978).

There is an essential difference between counseling and guidance. The counseling strategy is used only in the interest of the student. The student makes the decision in terms of what changes, if any, will be made. The

guidance strategy is employed when the condition or situation requires the professional to provide information and/or direction that the student is expected to follow, such as directions for taking a test or information about registration procedures.

CAREER COUNSELING SERVICES

The counselor works with students to facilitate effective communication skills that can be applied successfully on a personal and social level. Counseling also helps students to make decisions and solve problems regarding social and emotional adjustments. One-to-one or group counseling provides the occasion and help that students need to do in depth explorations of themselves; their values, aspirations, talents; and educational and vocational opportunities. It is also an occasion when students can make decisions about possible steps that may be taken to achieve goals.

CAREER GUIDANCE CONSULTATION SERVICES

Consultation may be viewed as an interaction process involving a consultant and a consultee for the purpose of facilitating human behavioral and organizational change by and for a client. (Carlson, (Splete, & Kern, 1975; Dinkmeyer & Carlson 1973; Kurpius & Brubaker, 1976). In the school/community setting the counselor frequently serves as a consultant. School administrators, teachers, specialists, parents, community leaders, and business and industry are frequently consultees. A consulting relationship may emerge when any one or a combination of consultees interacts with the consultant. The goal of this consulting relationship is to effect change by or for a student who in this case is the client. Figure 1 illustrates the operational relationships between consultant, consultee, and client. The solid arrows indicate direct communication while the dotted arrows indicate indirect communication.

When a counselor consults with others and the topic is career related, from a conceptual perspective the counselor becomes a Career Guidance Consultant. Several operational modalities are employed to provide effective career consultation services:

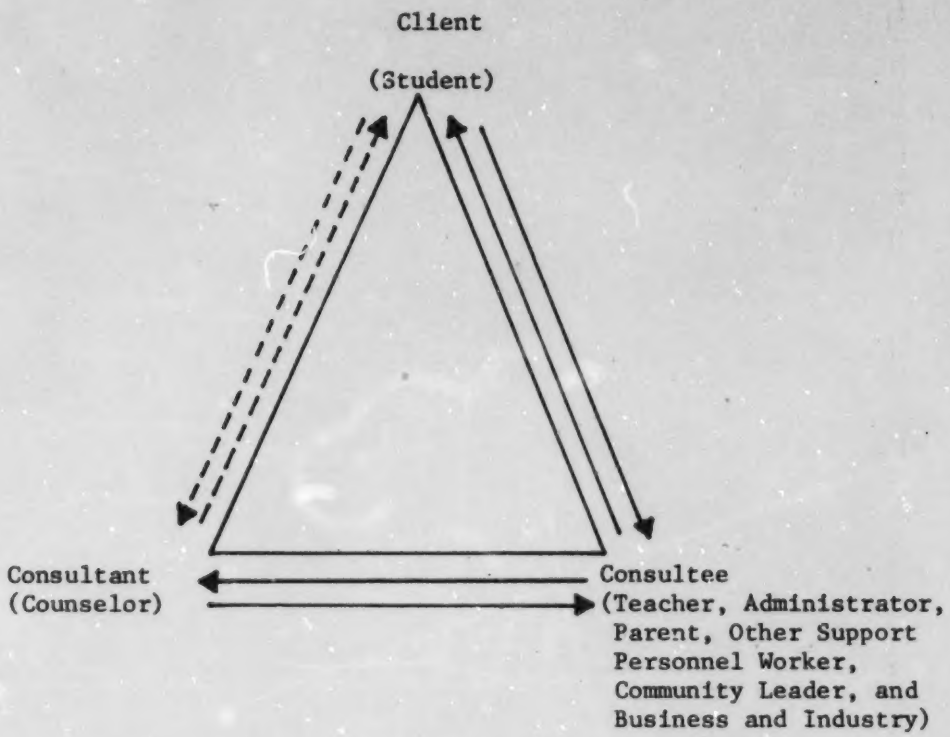
1. Collaborating. Working jointly (pooling resources) to explore career educational concerns, solve problems, and make decisions.
2. Mediating. Working to facilitate agreement where there may be disputes and coordinating others to avoid duplication of efforts.
3. Demonstrating. Showing or illustrating career educational processes, resources, and materials.
4. Inservicing. Educating and re-educating on-the-job teachers in career educational processes.
5. Articulating. Clarifying career education guidance services in relationship to other school or community programs and activities.
6. Disseminating. Making career information available to students, teachers, parents, support personnel, and others.

These operational modalities may be employed when providing consultation services to individuals in educational and community settings.

Administrators

The administrator is the educational leader in the school and thus can significantly affect the career education program. The counselor needs to be keenly aware of administrative policies, strategies, and attitudes. Regular conferences should be initiated by the counselor to establish and maintain a working rapport. This rapport gives a counselor the chance to influence the establishment of guidelines and discuss the effects of those guidelines on the development of an

FIGURE 1. Operational Relationships Between Consultant, Consultee, and Client.



effective career education program.

It is important for the counselor to be aware that the administrator will frequently have control of budget allocations. The counselor's responsibility is to request that allocations be made for needed career education materials and resources. This often necessitates providing a rationale and justification for such requests. The counselor, because of his or her special training in career education, is perhaps in the best position to provide this service.

Goals for consulting with administrators are to (a) learn administrative policies and attitudes, (b) develop an effective working rapport, (c) influence policies and attitudes about career education, (d) seek and lend appropriate support to administrators, and (e) make requests regarding career education materials and resources.

Teachers

In its purest form, career education takes place in the classroom. Career education involves the concept and practice of infusing career related experiences and activities into the existing academic curriculum. Consultation with teachers is used to define and interpret career education rationale and processes. Specific processes are assessed and selected for application. Counselors give and receive feedback, listen to specific concerns, and facilitate problem solving and decision making. It is important to point out that counselors are likely to be most effective with teachers when teachers view them as equals. A nonthreatening and nonjudgmental atmosphere is most conducive to effective teacher/counselor collaboration.

Counselor and teacher consultation conferences are also used to discuss specific cases. Since teachers generally have a better understanding of the educational skills and needs of students, the counselor acts as a facilitator in helping teachers articulate specific students' career development, assess the effects of certain techniques, select new techniques, and make decisions for referral where appropriate. This is also a time when materials and resources are discussed and evaluated.

One of the most important functions of the counselor in consulting with teachers is to provide and demonstrate career education process skills, that is, to illustrate to teachers the skills of infusing career education in the classroom. This frequently means working with the whole class while the teacher observes.

The counselor also has some responsibility in planning and implementing career education inservice training for teachers. The major role is to determine the areas of career education that have the greatest need for inservice training, initiate contacts, and secure the services of consultants.

Goals for consulting with teachers are to (a) define career education rationale and processes, (b) assist teachers in evaluating student career development, (c) assess techniques and materials, (d) demonstrate process skills, and (e) plan and implement inservice training.

Students

All support services provided by counselors have the ultimate goal of benefiting students. Students should have a voice in the selection and implementation of the experiences to which they are exposed. Sometimes students will reveal information about themselves that can be valuable in determining the most effective approaches to facilitating their educational preparation.

Goals of consulting with students are to (a) learn of their perceptions of themselves and their progress, (b) determine career educational activities they discern to be beneficial to them, (c) clarify perceptions, and (d) work to solve problems and make decisions.

Parents

The importance of parents to the lives of children and to the educational process cannot be overemphasized. Their insights can be invaluable. Their support for and reinforcement of learning strategies are often necessary for maximum effectiveness. Active involvement by parents as role models, resource consultants, and volunteers in various programs and activities is essential.

The role of the counselor is to consult with parents in one-to-one conferences or in regularly scheduled parent study or discussion groups.

Goals for consulting with parents are to (a) learn the perceptions parents have about the career development and educational experiences of their children, (b) create greater clarity about their children's career development and career educational experiences, (c) gain support and reinforcement for learning strategies, and (d) seek their active involvement as career role models, resource persons, and volunteers for school programs and activities.

Support Personnel

Because of their full time position in the school, counselors will frequently have a better overall grasp of academic, social and emotional circumstances than other support personnel. Therefore, it is their responsibility to collaborate, mediate, and communicate with other support personnel so that they may have the advantage of inside information. This approach also helps to avoid disputes and duplication of services.

The counselor consults with teachers as they make referrals to other support personnel. Here the counselor acts as an advocate for the student. This requires collaboration to clarify the students' needs and facilitate the selection and application of helping strategies.

Goals for consulting with support personnel are to (a) provide information about academic, social, and emotional growth and development of students, (b) coordinate and mediate support services, (c) act as an advocate for students, and (d) facilitate the selection and application of helping strategies.

Business and Industry

No career education program is complete without the cooperation of business and industry. Counselors do not have direct responsibility for classroom groups of students, thus they tend to have greater mobility. Counselors should go wherever their jobs take them. It is their responsibility to make important outside contacts when necessary. Collaborative visits to business and industry should be made on a periodic basis.

Goals of consultation with business and industry are to (a) seek career role models for in-school exposure for students, (b) gather career information, (c) seek opportunities for field learning experiences, (d) facilitate the understanding of persons in business and industry about the needs and characteristics of students, and (e) articulate educational experiences, strategies and goals.

DISSEMINATING CAREER INFORMATION

A major function of the counselor is to disseminate career information. In order to carry out this function effectively the counselor employs a variety of strategies that include writing letters, telephoning, and visiting locations to select and secure career information. After information is secured, it is evaluated and categorized and made available to students, parents, teachers and others.

Career Resource Center

One way the counselor makes information available is through the use of a central location where career materials can be stored. This is frequently a room in the school or a place in the library where adequate space is available for browsing or directed study.

Materials are stored in an orderly fashion and filed for easy access. The counselor or librarian should be careful to explain the filing system to users.

Newsletter

A newsletter is an excellent approach that counselors use to inform parents and the community of career education activities. It is also a valuable tool to keep teachers apprised of various career education support services available through the counseling and guidance department. In addition, the newsletter can serve to inform teachers of their colleague's career education activities.

Career Day

The counseling and guidance department often sponsors day or week long career education activities in which a concentrated period of time is provided for students to explore the world of work through resource consultants, displays, films, and discussions. Additional strategies such as bulletin boards, pamphlets, and other counseling activities can also be used at the discretion of the counselor.

EVALUATION SERVICES

The counselor coordinates and, where appropriate, conducts periodic evaluation and research projects to determine the effectiveness of the career education program. Evaluation and research efforts should be addressed to specific product (student) and process (enabling experiences) outcomes. It is important that evaluation and research be conducted in terms of specified goals.

Product Goals

In a career education program the product is the student. A product evaluation should be conducted to determine the effects of career education experiences on students and to assess whether or not students can perform as specified in the goals.

Process Goals

Process goals are specified actions designed to enable product goals to be attained. It is important to assess process goals to determine whether or not the enabling experiences were conducted as specified in the goals.

SUMMARY

The preceding discussion has presented features of guidance and counseling services that can have direct relevance to the career education needs of the handicapped. The role of the counselor has been described in great detail to emphasize that:

1. The counselor is an invaluable member of the career education program.
2. Existing career education strategies can be effectively applied with handicapped students.
3. The counselor's role and function with handicapped students should be essentially the same as with general education students.
4. Counselors can broaden their traditional role by becoming involved in delivering career education to the handicapped.
5. It is the responsibility of the special educator to recognize the value of the counselor and to insist that handicapped students receive the full benefits of career guidance and counseling.

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THE GUIDANCE INFORMATION SYSTEM: AN INNOVATIVE TOOL FOR MEETING THE CAREER EDUCATION NEEDS OF INDIVIDUALS WITH HANDICAPPING CONDITIONS

Kathleen M. Monaco

Meeting the career development needs of individuals with handicapping conditions is a major problem for school systems, vocational rehabilitation centers, and career centers throughout the United States. Three tasks facing teachers and counselors are increasing a person's self awareness, increasing his or her understanding of lifestyles and career roles, and increasing his or her skill level in decision making and planning. Basic to each of these elements is the availability of sound information. The information must be readily accessible, accurate, and up to date. The Guidance Information System (GIS) can help handicapped individuals by providing realistic information about occupations that reflect their interests and abilities. It can also provide information about where to go for further education.

OVERVIEW OF GIS

The Guidance Information System is a computer based data retrieval system that provides the user with access to occupational, college, and financial aids information. This career information system is currently being used in 38 states and Great Britain. It is available in over 2,200 sites in a variety of settings including junior and senior high schools, junior and community colleges, adult counseling centers, vocational rehabilitation centers, and the US Department of Labor's Comprehensive Employment and Training Act (CETA) centers. It is being used in programs for the mentally retarded, physically handicapped, vocationally handicapped, learning disabled, and emotionally disturbed.

The process of using GIS is one of narrowing options. By giving the computer a series of instructions on a typewriter-like terminal, users can focus on information that meets their particular needs and interests. For instance, a person using the Occupational File might direct the computer to explore occupations in the Manufacturing Cluster that require a high school education or less, involve working with machines or equipment, and require only light lifting. The computer would generate a list of qualifying occupations from which the user could select one or more to get more detailed information. In this way, each user can interact in a unique manner with the vast amount of information available. The GIS makes it possible for a user to examine the ways in which his or her personal criteria for the selection of occupations and/or schools affect the range of options available The system allows a user to see the results of choices and decisions and compare them immediately with the results of other choices.

DATA FILES

There are, at present, five data files in the national Guidance Information

System: the Occupational File, the Four Year College File, the Two Year College File, the Graduate School File, and the Financial Aids File.

The Occupational File (OCCU) is made up of information on over 850 occupations. The information in this file is gathered from federal and state agencies, trade unions, professional organizations, and businesses throughout the country. It is updated annually and continually verified for accuracy. Users may choose selectors relating to interests, education levels, career clusters, aptitudes, and physical demands of the occupation to organize their search for information. There is additional information about salary ranges, employment outlook, and working conditions. In addition, the OCCU file is cross referenced to other sources of career information.

The occupational information the user gets from GIS can help in the career decision making process by providing accurate, up-to-date information. The Guidance Information System can be an exciting part of any career education program. It has proved to be especially helpful in exploratory sessions where handicapped students often show an unrealistic or narrow view of the world of work.

Consider the following example: Ann is a 16 year old sophomore in classes for the educable mentally retarded. During a guidance session, she tells her teacher she wants to be a nurse because she likes to help people. Rather than telling Ann that it would be very difficult for her to become a nurse, the teacher plans a session with Ann using GIS. When Ann prints out the information on registered nursing she learns that either three to five years of vocational training or an associate or bachelor's degree is required. She also sees that a registered nurse should have good math skills. The teacher encourages Ann to plan a search based on characteristics important to her. They want to focus on the jobs that require a high school diploma or less in the health field and do not require good math skills. The computer printout indicates that 20 jobs meet these requirements, including diet clerk aide, hospital guide, community health worker, and emergency entrance attendant. With GIS, Ann can get more information about any or all of these jobs to help her make some sound occupational decisions.

GIS increases the career awareness of anyone who has had, is now getting, or is preparing for skill training in various areas of work by presenting a list of jobs related to the one being printed. This encourages further exploration. The area of career education is becoming an increasingly important part of a high school student's individualized education plan (IEP). The Guidance Information System can help meet this requirement by providing the student with the information she or he needs to make career decisions.

The data on aptitudes and training required and the physical demands of the job are useful in focusing on those work activities that the handicapped individual is able to perform, or in assessing whether a job might be restructured in some way. It is also helpful to the counselor in planning vocational programs and skill training activities that are related to the student's or client's interests and abilities. The printout of occupations can also provide the counselor with new ideas about occupations that may not have been previously considered. The job descriptions help prepare the counselor and client to discuss placement or job restructuring with prospective employers.

The handicapped student often has a need for information about two and four year colleges. The Four Year and Two Year College Files enable users to explore information on more than 3,000 colleges across the country. The files contain information on college program offerings, costs, campus life, national test scores, special programs, and so forth. GIS users may examine a list of over 500 characteristics in making choices about college selection. An important feature of the GIS is that handicapped individuals are able to

focus on special services that a college offers. GIS has characteristics that allow a student to determine if a college has remedial or tutorial programs, formal counseling services, or services for the hearing impaired, deaf, blind, mobility impaired, or learning disabled.

The Graduate School (GRAD) File contains information on over 1,000 graduate schools and their programs. Information is available about degree requirements, placement, financial aid, and so on. The information in the GRAD file comes directly from the participating schools. It is updated annually and verified for accuracy.

The Financial Aids Information File details aid possibilities from sources such as federal and state governments, foundations, businesses, the military, trade and labor organizations, and religious and charitable groups. A special section of the file identifies sources of financial aid that are specifically designated for the handicapped student.

The Guidance Information System is supported by the Guidance Information System Guide (1978), the Guidance Information System Implementation Kit (1978),and a sound filmstrip, A Trip to the Pyramids. The Guide contains all the characteristics of occupations, schools, and financial aids from which a user can choose to develop a GIS search. It also delineates the instructions a user will need to operate the system. The Implementation Kit outlines for counselors techniques and methods designed to enhance their utilization of the GIS. It also provides training materials and presents ways of integrating the GIS into existing counseling and academic programs. It points out how the GIS can be used effectively with handicapped students and adults. Staff members of Time Share Corporation are available to conduct inservice workshops for GIS users at no additional cost.

CONCLUSION

The Guidance Information System is a comprehensive resource which brings together much of the data needed in the initial stages of the career decision making process. The flexibility of GIS greatly enhances its usefulness and makes it a viable counseling tool in the development of decision making and planning skills. GIS closes the communication gap between the facts and those who need to use them for effective decision making. The Guidance Information System can be a dynamic resource to individuals with handicapping conditions and to those who are responsible for providing them with career information.

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PART V

Community Involvement

CONSUMER INVOLVEMENT IN CAREER AND VOCATIONAL EDUCATION FOR HANDICAPPED STUDENTS

Jane Ann Razeghi

Why train disabled adults as volunteer consultants in career education and vocational education? This is perhaps the first question that educators ask regarding a recent project of the American Coalition of Citizens with Disabilities (ACCD). Statistics alone can provide part of the answer:

- There are an estimated 8 million handicapped children and youth in America today, of whom about half are receiving the education services they need. One million are out of school altogether.
- In a typical year, only 40 percent of all disabled adults are employed, compared with 75 percent of the general population.
- The average weekly wages of employed disabled males are 22 percent lower than those of their nondisabled counterparts.
- Only 1.7 percent of the total fiscal year 1976 enrollment in vocational education programs was identified as handicapped.
- Of the handicapped students who were enrolled in vocational education, 70 percent were placed in separate classes.

These statistics clearly spell out the problems: disabled adults are unemployed and underemployed. While the laws (such as Section 504 of the Rehabilitation Act of 1973) offer protection for qualified individuals in employment and service provision, they do not extend similar assistance to unemployed and underemployed disabled persons. Certainly, the federal initiatives are the first steps for handicapped persons toward equality in employment opportunity, but before such opportunity can become a reality, something has to happen.

Most people become qualified for employment through education, training, and experience. Because handicapped individuals have not received such education, training, and experience in the past, they are not considered qualified. If they are not qualified, they are not employed. To acquire the necessary skills for employment, careers and career alternatives must be identified, appropriate career education must be provided, and admission to vocational education must be obtained for all handicapped students.

TRAINING CONSUMER CONSULTANTS

ACCD is seeking successfully employed disabled adults-- many of whom are leaders in their own communities -- for training as consultants because they are successful, they are leaders, and they have achieved much of their success without the laws, advocates, or consultants. They have therefore learned how to succeed on their own. Believing that such individuals are a virtually untapped resource in this country, ACCD is training them to work with educators, admini-

strators, school board members, students, parents, and others in the community so that people will become aware of what interventions and changes can be provided to achieve the ultimate success -- employment -- for all handicapped youth.

Even the best trained educators need assistance in seeing beyond the handicap to the potential, beyond the disability to the ability. They need to know what problems disabled workers face, what career and vocational educational opportunities are available, what educational modifications in the ongoing career education and vocational education programs are needed, and how to guide handicapped students toward careers. ACCD believes that there is a place in this planning for disabled adults and that there is a need for their perspective. It is with these goals in mind that ACCD is preparing suitably employed disabled adults to serve as volunteer consultants in career education and vocational education.

The first few months of ACCD's Career and Vocational Education Project were devoted to completing the training materials, Resource Guide for Consumer Consultants in Career Education and Vocational Education (Razeghi and Bowe, 1978), to be used in the workshops. Other activities have involved the development of a feasible model for implementation, communicating with several state education agencies regarding the possibility of workshops in their states, and reviewing with various state consumer groups the possibility of their involvement in the project.

A significant workshop was held in conjunction with the National Conference on Interagency Cooperation in February 1979. ACCD was instrumental in assuring the participation of handicapped persons in the interagency conference to which the state directors of special education, vocational education, and vocational rehabilitation from all the states were invited. It was the first time in this country that the state directors of the three agencies had met to discuss cooperative planning for the handicapped. ACCD trained all of the consumers (disabled adults) who were involved in the conference. It provided tremendous opportunities for these disabled individuals to interact with their state directors and to assist them in future planning for their states.

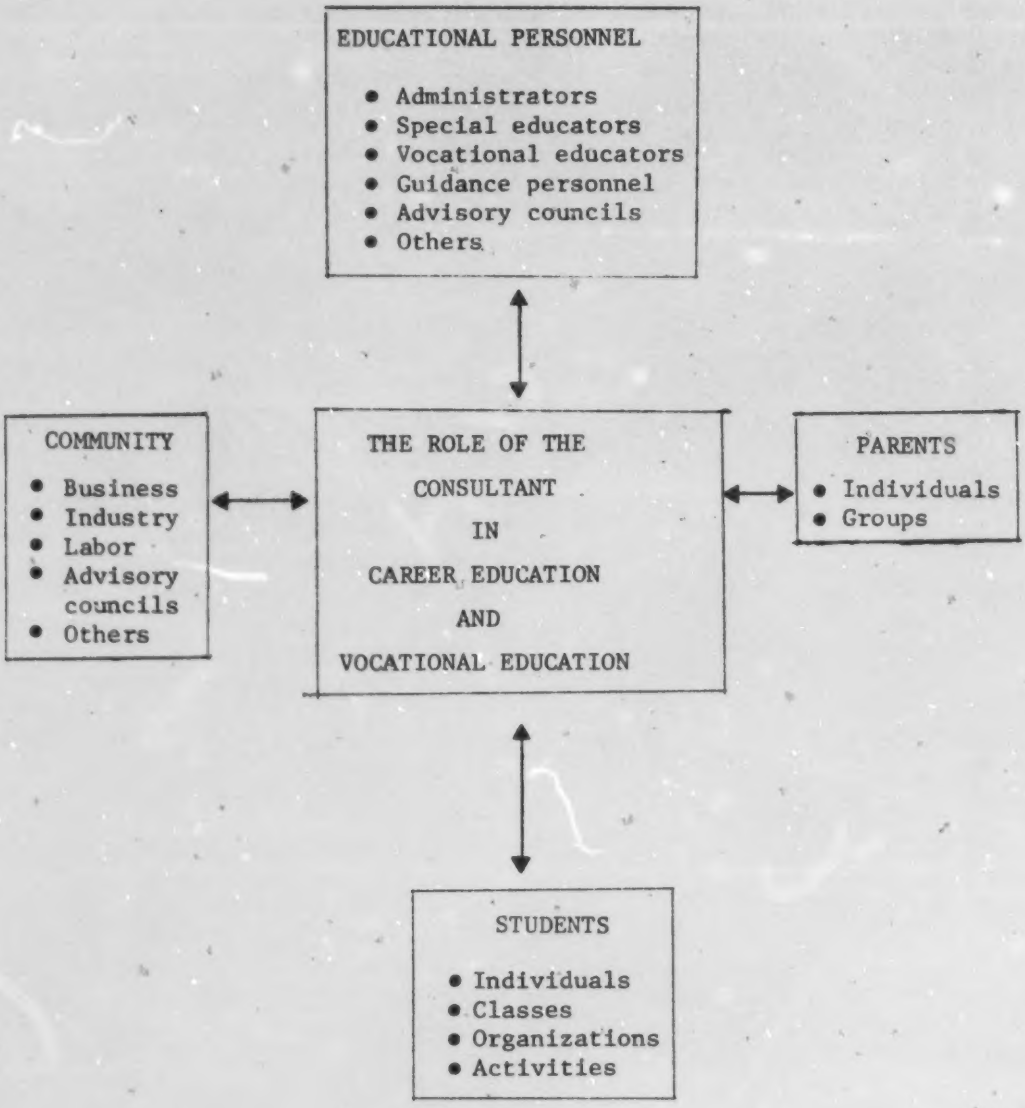
ROLE OF CONSUMER CONSULTANTS

The role of consumer consultants in career education and vocational education involves working with and assisting educational personnel, parents, students, and community resource groups and persons. Probably one of the most important aspects of the role for consultants is to function as role models for both handicapped and nonhandicapped students and educators in the schools and in the community.

Figure 1 provides a visual image of the various directions in which consultants can become involved. They can offer various resources, services, advice, and assistance to the career, special, and vocational educators. They can play major roles as liaisons between students, schools, and the community. As such liaisons, they can perform many functions in public relations such as:

- Developing and sponsoring comprehensive community public relations programs.
- Identifying and coordinating various community resources for instructional programs.
- Coordinating community needs with manpower supply and demand and conducting followup surveys to collect relevant and supportive information for decision making.
- Serving as resource persons in the classrooms, making worksites available for career awareness, career exploration, and work experience opportunities for handicapped students.

FIGURE 1. The Consultant's Role



- Facilitating communication between career and vocational educators and other school personnel regarding the career needs of disabled persons.
- Facilitating the development of individual programs for disabled students in career and vocational classes.
- Coordinating available school and community resources for individual students to indicate which teachers and other educational personnel will be working cooperatively to meet the needs of these individuals.

In the specific area of technical assistance, consumer consultants can provide resources and services in terms of information or actual materials on such subjects as the nature and needs of disabled students; techniques to develop modified programs; career options including information available on jobs; new social, population, and occupational trends; needs of business, labor, and industry in the community; and working environment modifications to facilitate employability of disabled individuals.

Consumer consultants can offer advice. As disabled individuals, they can review and provide recommendations on the following:

- The appropriateness and relevancy of instructional content.
- Instructional materials, facilities, and equipment.
- Curriculum changes, additions, and modifications.
- Program evaluation.

In relation to work, they can offer advice in identifying job titles available and attainable for disabled individuals; new directions for work; job analysis and whether jobs can be done by individuals with certain disabilities; and job placement where an individual has sufficient qualifications to meet specific needs. The consumer consultant can provide assistance in followup and coordination of the career education curriculum with the staff and perspective to parents of disabled students on feelings and experiences.

USE OF CONSUMER CONSULTANTS

There are numerous areas where consumers trained as volunteer consultants can be used. The following is a list of suggestions which is by no means exhaustive:

1. Advisory Councils
   The laws indicate that qualified disabled individuals should be included on advisory councils for vocational education, career education, and special education at the national, state, and local levels. Other civic, professional, and community organizations may also be interested in using the resources which qualified disabled adults have to offer.
2. Parent Groups
   The Parent Teacher Association (PTA), National Association of Retarded Citizens (NARC), International Association of Parents of the Deaf, Association of Citizens with Learning Disabilities (ACLD), and other such associations have state and local affiliates through which consumer consultants may want to work.
3. Professional Organizations
   This would include state and local chapters of The Council for Exceptional Children (CEC) as well as any other professional organizations that do not usually experience direct consumer input.
4. Youth Organizations
   Youth organizations are mentioned because schools are often in need of volunteers to sponsor and cosponsor such groups. Role modeling provided by consumer consultants can benefit the nonhandicapped students and teachers as well as the handicapped. Through contact with successfully employed disabled adults, higher

aspirations for handicapped students will be more obvious.

a. Vocational education youth organizations (integrated, not separate):
   Distributive Education Clubs of America (DECA)
   Future Business Leaders of America (FBLA)
   Future Farmers of America (FFA)
   Future Homemakers of America (FHA)
   Office Education Association (OEA)
   Vocational Industrial Clubs of America (VICA)
b. Other high school youth organizations and activities:
   Future Teachers of America
   Speech team
   Drama club
   Debate team
   Science club
   Art guild
   Mountain climbing club
   Service clubs, such as Keyettes, Key Club, others
   Cheerleaders
   Drill team
   Foreign language clubs

5. Classroom Teachers
   Working with classroom teachers as resource persons or guest speakers is another way for consumer consultants to become involved.
6. Inservice Workshops
   When schools or educational agencies are planning to provide inservice training for teachers in how to teach handicapped students, volunteer consultants can be used as small group leaders with regular, vocational, or special educators. Many teachers have not had the opportunity to gain the perspective of the capable disabled adult.
7. Guidance Department Activities
   Many large high schools are trying to provide career centers for their students. Consumer consultants might enjoy contributing a few hours a week to counseling in their area of expertise or even assist schools in developing career information centers for all students. Many schools sponsor career fairs through either the guidance or vocational departments. Consultants representative of various occupations could be present and available at such functions.
8. College and University Teacher Preparation Programs
   It would seem logical for those programs which are preparing teachers of handicapped students to seek input and interaction from qualified disabled adults. Hopefully, such interaction would raise the teacher trainees' expectations for the students they will eventually be teaching.
9. Community Speakers' Bureau
   Consumers who are effective speakers make themselves available to inform community organizations about what is happening and what should be available for the handicapped students in their community.
10. Task Forces on Curriculum
    Today's media, materials, and lesson plans often exclude any mention of handicapped students or adults. By assisting in the planning or by serving as resources for the writing and preparation of such materials, consumer consultants can ensure that the perspective of handicapped people is not omitted. These could be task forces on any curriculum -- regular, special, career, or vocational.

Contained in this list are just a few of the suggestions that ACCD is giving the consumer consultants. There are other areas in which their involvement would be effective.

CONCLUSION

Many educators and parents are committed

to assisting handicapped students to reach their full vocational potentials. Many, however, do not seem to see those potentials, perhaps because the disabilities appear so prominent or because they have not been exposed to evidence of success by disabled adults. Often teachers in training are not fully prepared for teaching handicapped students until they understand what they are teaching for -- what problems will be faced, what skills and attitudes are needed, what the opportunities for career achievement are, what modifications in career education procedures are necessary, and how to guide students toward career goals commensurate with their interests and abilities.

The critical point is that a teacher, an administrator, or a parent must believe that the efforts he or she makes are potentially productive, that there are in fact career opportunities for even the most severely disabled adult. The point is that disabilities can be overcome and the individual may achieve to the limits of his or her abilities. Once such an attitude has surfaced, teachers, administrators, and parents will explore more fully all the alternatives to career education and the ultimate success -- employment opportunities for all handicapped students!

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CAREER EDUCATION: A COLLABORATIVE PLANNING PROCESS BETWEEN COMMUNITY AND SCHOOL

Thomas S. Simek
Philip I. Matilsky
J. Steven Banks

As a result of current federal and state legislation, litigation, and the efforts of various advocacy groups, there is now an urgent need to provide appropriate vocational education for handicapped pupils. Handicapped individuals have not had adequate access to the educational system and have received less than a proportionate share of vocational education provided in the public education sector. Public Law 94-142 (the Education for All Handicapped Children Act), Sections 503 and 504 of the Rehabilitation Act of 1973; Public Law 94-482 (Vocational Education Act of 1963, as amended by the Education Amendments of 1976), and most recently the July 1978 US Office of Education position statement on comprehensive vocational education for the handicapped are assisting handicapped persons to participate in regular vocational education.

Today, parents and public school officials are discussing the prevocational and vocational training needs of exceptional pupils in individualized education program (IEP) planning conferences. How does the special educator respond to a parent who asks: "What are you doing to make sure my child will find and hold a job? I want to be sure my child will be able to take care of himself when I die." These typical parent concerns, coupled with legislative mandates, have guided Montgomery County Intermediate Unit (MCIU) into its 14th month of a community-school collaborative planning process.

PRE-COMMUNITY/SCHOOL COLLABORATION ACTIVITIES

Programs for the mentally retarded have traditionally received the attention for prevocational/vocational skill training. With the legislative emphasis on "all handicapped children," MCIU wanted to approach the total process of career development including vocational education from a single cross categorical model that would be applicable for all exceptionalities. A committee composed of MCIU special education supervisors representing each area of exceptionality was selected and began to review the strengths and weaknesses of career education services the Intermediate Unit offered, as well as programs in school districts within the county and outside of the county and state. The committee formally critiqued these observed programs after each visitation. Some of the observations and questions included:

1. There is a tendency to purchase only one of the commercially available assessment kits currently on the market in the regional vocational centers which have pre vocational skill assessment. There appears to be a need to develop a comprehensive evaluation battery comprised of components of the various kits available in order to

assess prerequisite skills needed for courses and to assist administrations in developing new courses relative to the skill development potentials of the handicapped student.

2. Handicapped students are being trained on one or two specific job entry level skills. Training to job clusters would provide the student with more diverse skills enhancing employability.
3. Could sheltered workshops be used for an on the job training site leading to job placement outside the center?
4. What role does the computer play in matching student competencies with job placement?

The visitations, coupled with the critique/discussion sessions and selected readings, provided the internal staff committee with a uniform knowledge base upon which they could begin to address the viability of a cross categorical model concept and how it might impact on their area of exceptionality. A suggestion to submit a federal/state proposal to support a career education coordinator was contemplated. As this was discussed further, committee members realized that there were built in failures in developing the proposal. It conjured up the rationalization of, "If we have a problem, let's put a person totally in charge of it... that way it becomes his or her problem, not ours." Beware of this "add on" approach to educational change, for career education implementations depend on changing the attitudes, knowledge, skills, and actions of the participants, if a true refocusing of education is to occur (Hoyt, 1976). Career education could not be simply viewed as a problem for the education system. Any planning that takes place within the Intermediate Unit will eventually have an effect on the community. Hoyt (1976) stated:

> Collaboration in career education is intended to imply the need for action and policy formulation responsibilities to be assumed by non-educators as well as by educators. It is essential that persons, agencies, and organizations outside the structure of formal education be given part of the credit wherever career education succeeds... and part of the blame if career education implementation efforts fail in any given community. (p. 13)

Why collaborate? Eyster (1975) suggested four reasons. First, collaboration facilitates the sharing of professional expertise and experience. Second, the number of people served and the number of services offered can be increased through interagency cooperation. Third, coordination between agencies makes each of them more visible in the community, and finally, collaboration allows the participating agencies to support each other and to tap other sources of funds, reducing costly duplication in time and effort.

COLLABORATIVE MODEL DEVELOPMENT

Several models for community-school collaboration were reviewed (Griffith et.al., 1973; Weishan & Drake, 1975). An advisory council was designed. Criteria for membership came from what was termed the Career Development-Life Cycle Coordination System shown in Figure 1.

Membership

The system represented those persons, agencies, and organizations that would affect both directly and/or indirectly the choices of handicapped students and adults relative to the development, maintenance, and decline of their careers. The membership of the Career Education Advisory Council (CEAC) was selected from each component in this system. Representation came from the following: County Department of Vocational Rehabilitation, the Local

Mental Health/Mental Retardation Agency, parents, County Guidance Association, area vocational-technical schools, County Association for Children with Learning Disabilities, County Association for Retarded Citizens, Residential and Community Living Arrangements, Chamber of Commerce, private schools, sheltered workshops, school district superintendents, and Intermediate Unit Career Education Coordinator.

The first meeting of the CEAC group centered on discussing how the members saw themselves as part of a school-community career education venture and identifying their concerns about career education for the handicapped. The first objective of the council was to design a philosophy and outline a set of goals and objectives determining their work scope for the coming year.[1]

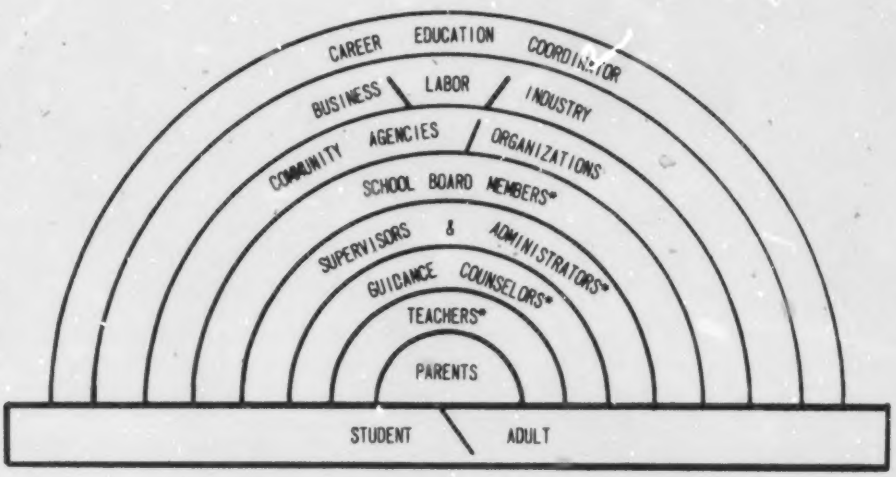
[1]Materials are available from Dr. Philip I. Matilsky, Career Education Coordinator, Special Education Center, 1605-B, West Main St., Norristown PA 19403

Goals and Philosophy

The goals and philosophy of the council had to be written in a manner conducive to longitudinal planning as immediate overextension of resources could lead to an automatic self destruction of the organization. It was essential for the goals and philosophy to be acceptable to all the varied interest groups represented on the council since the final document would set the thrust of work in MCIU for the coming years. The final philosophical statement of the council became:

> Career education is a purposeful, sequential process through which the schools, family and total community cooperatively seek to assure the satisfactory career development of young people and their preparation for adulthood and successful transition into the world of work. Further, it is recognized that this process is one which continues throughout every person's lifetime, regardless of race, sex or condition of life, and for which society is obligated

FIGURE 1. The Career Development-life Cycle Coordination System



CAREER DEVELOPMENT - LIFE CYCLE COORDINATION SYSTEM

*public & nonpublic

to make provisions.

It was decided that career education is a process which assists each person to become aware of the many occupational opportunities and provides ways to explore these as they relate to one's interests and abilities. Career education is concerned with the relationship between self image and envisioned life styles and career options. It is a vehicle through which the individual may acquire an understanding of the economic system and values of a work oriented society. This process should allow people to develop worthwhile work related attitudes and entry level skills. These skills should include, but not be limited to, decision making, interpersonal relationships, and an essential command of reading, writing, and mathematics necessary for the attainment of a productive and rewarding life. Career education requires a mutual responsibility or partnership between school and community and should be more concerned with its responsibility toward the student and the community in terms of improving the transition of young people into the world of work. Therefore, the council acts as a catalyst in the implementation of a purposeful and sequential career education program for exceptional students.

Community-School Issues

It is essential that any collaborative planning process include implications for the school system within the gestalt of career development from the Life Cycle Coordination System approach. Special education personnel often develop procedures and perspectives unique to the individual's age and fail to meet the total life cycle needs of the student. Educational ethnocentricity must be avoided at all costs if a collaborative approach to career education is to be successful.

The MCIU has, therefore, made an attempt to deal with issues crucial to both the community and the schools. Some of the issues include:

1. The relationship between Mental Health/Mental Retardation and the Bureau of Vocational Rehabilitation as it affects students entering the employment market.
2. Reaction and critique of the proposed State Department of Education's career education plan.
3. Development of barrier free access routes for the member organizations.
4. The development of nonduplicative vocational evaluation systems among member agencies.
5. Exploration of possible ramifications of noncategorical models of vocational development.
6. The provision of technical vocational expertise by member agencies to other member agencies.
7. The use of advocacy pressure to affect legislative impact on vocational education (e.g., policies of CEAC as they reflect on the rescinding of Public Law 95-207, the Career Education Incentive Act.)

PROJECT PISCES

The collaborative planning system has begun to change the direction of career and vocational education programing in MCIU. Not only has the Intermediate Unit (IU) begun to recognize the need for programing models that are cross categorically based, but the IU has, with the input of the Career Education Advisory Council, developed programs and projects specifically designed to meet critical needs in the county. One project that was already under development provided the council with an opportunity for direct support.

Project PISCES (a Pilot Infusion System for Career Experiential Studies) is a Title IV-C funded project serving students, ages 14 to 21, diagnosed as socially and emotionally disturbed (ED) or learning disabled (LD). The

project formally began on August 15, 1978. Conceptualization of the project was based on the common needs and concerns of ED/LD students and their teachers. It was found that numerous students on the secondary level were truant or dropping out of school. Many of these students could be included in a larger group of students who could not benefit from traditional, special, or vocational education. These youngsters needed specialized guidance, direction, and a support system to assist them in realizing, experiencing, and exploring the world of work.

Objectives

Project PISCES objectives are to:

1. Develop, implement, and disseminate six Career Education Curriculum (Experiential Education Curriculum) Units addressing the needs of ED/LD secondary students regarding self awareness, career awareness, decision making, educational awareness, vocational skill identification, and employability skills.
2. Develop, implement, and disseminate a Community Resource Guide which identifies individuals who are willing to speak to student groups and/or provide work site stations.
3. Develop and implement inservice training programs for selected ED/LD teachers, parents, regular education teachers, and employers.
4. Develop and implement a career oriented work-study program appropriate for ED/LD students who, at this point in their training, are deemed inappropriate for placement in area vocational technical schools.

Curriculum

An advisory council was established to provide input into the Experiential Education Curriculum and the Community Resource Guide, assist in problem solving, and provide project direction. The advisory council is composed of parents, employers, private and public school administrators, teachers, and individuals from local businesses and industries.

Unique components of Project PISCES include its curriculum, advisory council, and built-in check support system (see Figure 2, PISCES abbreviated flow chart).

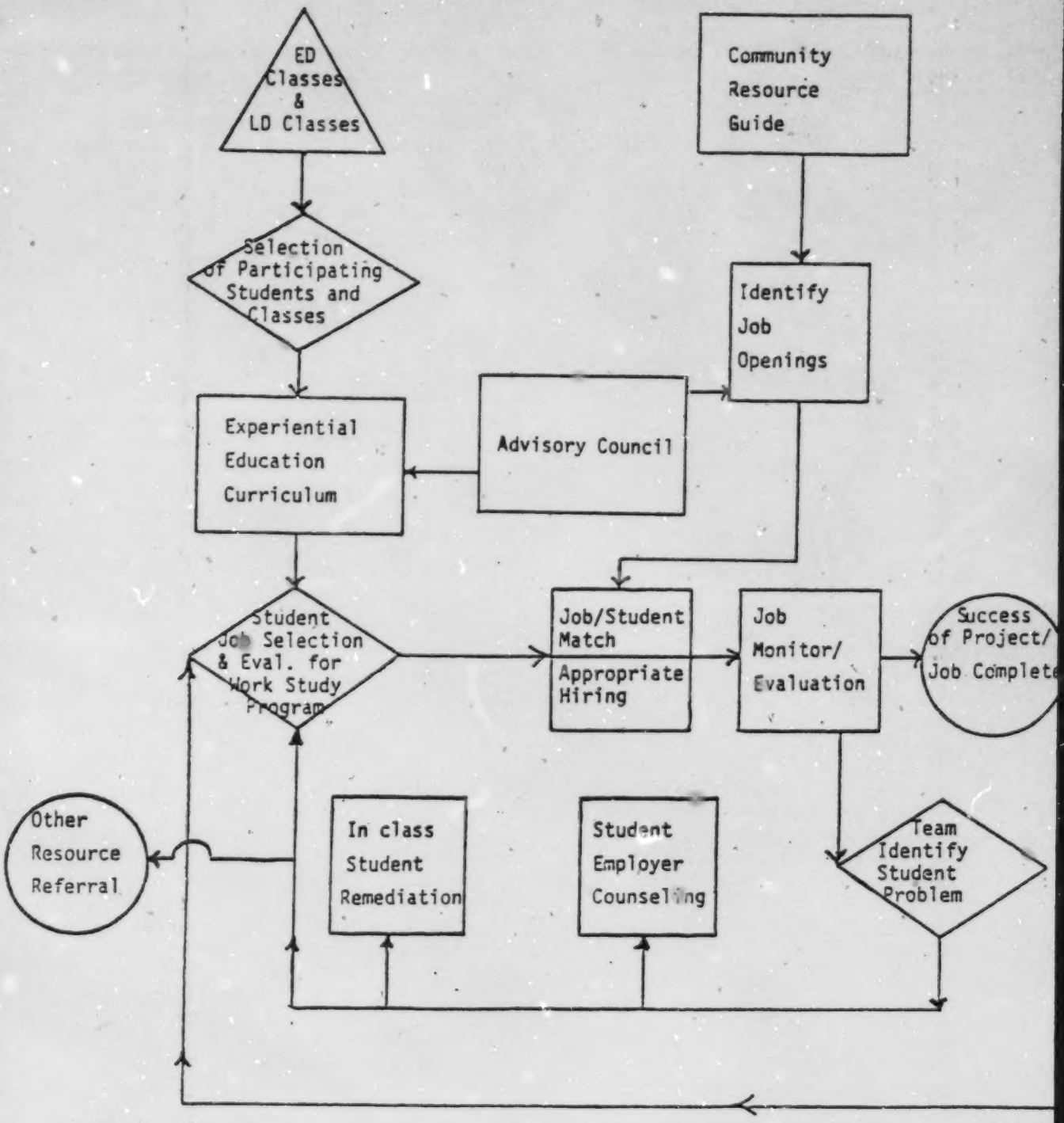
The curriculum is especially tailored for ED/LD students and emphasizes step by step approaches, repetition and practical application of items such as the correct method of completing necessary forms, and securing and maintaining a job. The student maintains a curriculum notebook that focuses on his or her individual needs. This provides the pupil with a current resource and a reference that may be used after completing formal education. After the student has completed the Experiential Education Curriculum and his or her attitudes and aptitudes are evaluated, a team decision is made regarding capabilities and readiness for a work-study placement. After a student/job match has been completed, the pupil is interviewed and, if successful, is hired by a community based employer.

Job Placement

The job placement is monitored by the field director who reports this information to the special services support team. This team consists of a special education teacher, aide, supervisor, social worker, master itinerant teacher, and psychiatrist/clinical psychologist. Feedback is also provided by the parents and employers. In this manner all individuals involved with the student are aware of the most current information. This enables all those involved to assist the student in remediating both academic and behavioral areas that may be problematic.

FIGURE 2.

PISCES : A PILOT INFUSION SYSTEM FOR CAREER EXPERIENTIAL STUDIES



Project PISCES presently serves secondary ED and LD students. Plans include extension of the project to all high incidence exceptionalities on both the elementary and secondary level.

AN INTEGRATED APPROACH TO CAREER EDUCATION

The Career Education Advisory Council has enabled the Intermediate Unit to begin approaching career education through an integrated approach. The IU has begun to develop cross categorical systems in concert with the Area Vocational Technical Schools (AVTS). The council has expressed concern that the educational opportunities offered special needs students at the AVTS were extremely piecemeal in nature. It was essential for the IU to work closely with AVTS staff in developing models for educational opportunity and support for increasing numbers of special needs students entering the vocational technical schools. Interactive vocational education, using both vocational and special education staff, is an innovative concept. Without input and guidance through a collaborative planning approach, interactive educational models would still be a figment of administrative imagination.

One of the most significant inputs is the provision of technical expertise from external sources for curriculum development in vocational and career education areas. Educational ethnocentricity has already been discussed. It has to be recognized that individuals from businesses and agencies, as well as parents may have significant input in the development of curriculum models in the areas of career and vocational development. Prior to collaborative planning this expertise was rarely available to special education.

FUTURE OF COLLABORATIVE EFFORTS

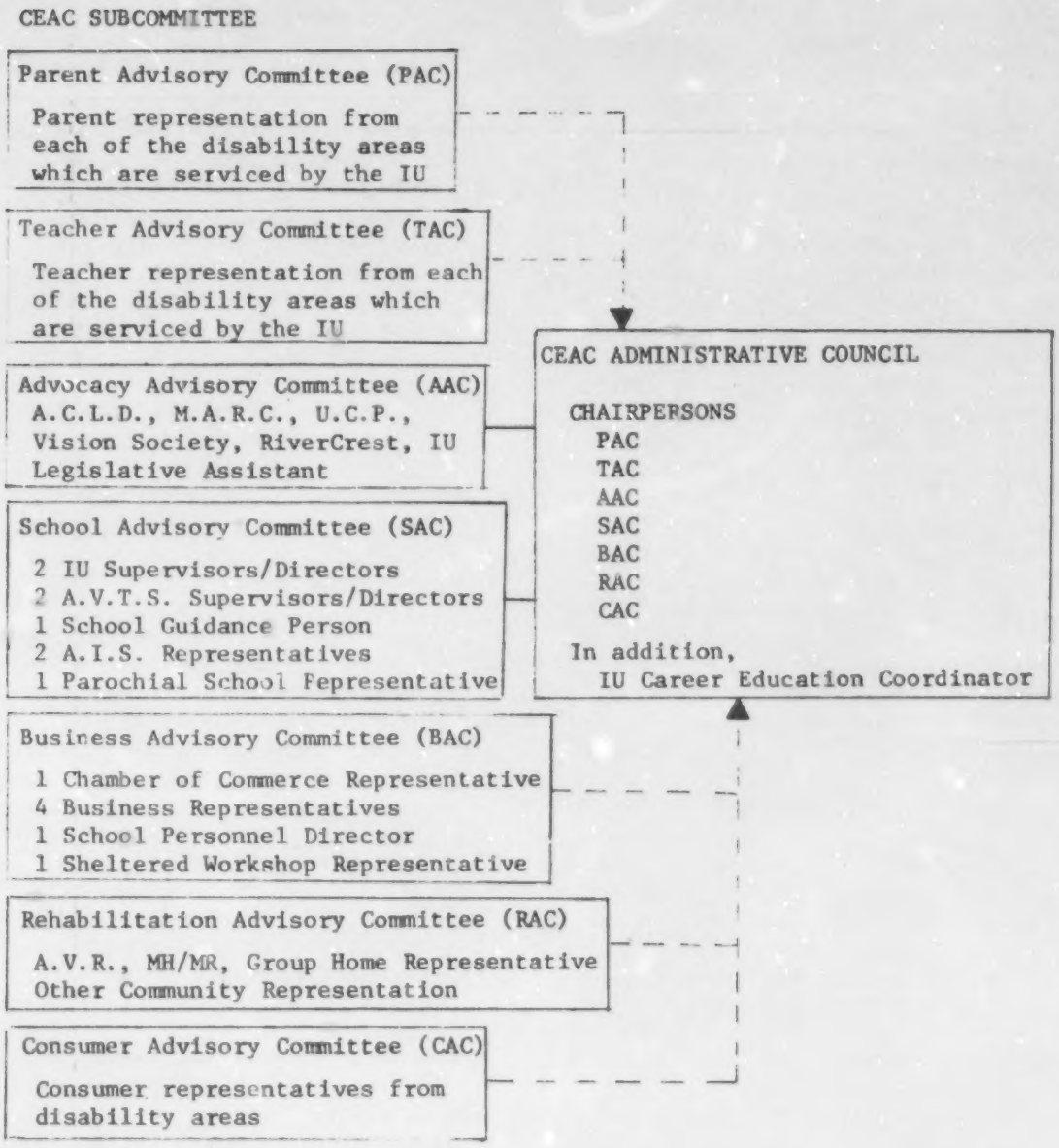
Although collaborative planning has caused significant change in special education in Montgomery County, a number of goals have been identified for future consideration:

1. Elimination of program duplication among agencies within the county.
2. Development of noncategorical systems of vocational preparation with entry based on skill analysis of student.
3. Creation of a multiagency job bank for both work-study and competitive job skills (including job analyses of each).
4. Increased interactions with districts and private schools to develop a county wide career education program.
5. Continuation of the advocacy function especially as it relates to career education funding.
6. Cooperation with colleges and universities to create training programs geared to meeting interagency needs.
7. Cooperation with county commissioners to develop viable transportation systems for handicapped students.
8. Development of an ongoing tracking and retraining system to guarantee that each individual is identified and served within the bureaucracy.

The CEAC has recognized that collaborative planning must be an evolutionary process. Restructuring the council is necessary in order to have maximum input into the total spectrum of career and vocational development of the student with exceptional needs. Figure 3 shows the planned restructuring of CEAC for the 1979/80 year.

This reorganization provides for additional membership on either the council or the subcommittee. In addition, it will allow for individual subcommittees to act on issues critical to their interests without having to redirect their attention to issues

FIGURE 3. Organization of Career Education Advisory Council



that do not affect them. This structure will, however, through the mechanism of an administrative council, provide appropriate input and communication to each of the subcommittees. It should also provide for appropriate consumer input (which is lacking in the present organizational structure) to career development in Montgomery County.

It has become obvious that collaborative planning efforts in career education are a viable and essential adjunct to the special education program. Integrative planning and cooperative expertise sharing has proven beneficial for all groups involved in the process. For the first time, education in Montgomery County is no longer isolationist in its approach, but has accepted and benefited from an eclectic approach.

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MAINSTREAMING THE HANDICAPPED INTO BUSINESS AND INDUSTRY

Richard M. Stone

My knowledge of the career education concept is limited, so I will make no comments on it, other than to say that Michigan Bell cooperates as much as possible with educators who are developing programs in our state.

My expertise centers on the hiring of the handicapped at Michigan Bell. That program has been my responsibility since its conception in 1974. It is the perspective of business on employment of the handicapped that I would like to explore.

The inspiration for a formal program did not come from within the company. Some important people in Michigan asked us some questions about the hiring of the handicapped and whether we had any policies or programs. We did some searching, talking, and head scratching, and finally came to the conclusion that, "No, we did not have any formal programs or policies." However, our investigation did convince us that we should. Our employment of the handicapped was, in fact, a hit and miss affair. Our personnel vice-president said, "Do something about it," and he said it to me.

The first thing I did was send out an SOS to Lansing, the state capital, for the first of many meetings with the State Department of the Bureau of Rehabilitation. My colleagues and I were completely uninformed about the handicapped. We did not even know what the term handicapped meant. If I was going to organize and professionalize a program of hiring the handicapped at Michigan Bell, the only sensible thing to do was seek help from the experts in our state.

The Bureau of Rehabilitation responded quickly to my plea for help. They designated people to work with us on a statewide basis, studied our jobs, analyzed our employment procedures, and informed us of their capabilities and how they could help us.

Michigan Bell was very fortunate. I cannot say enough about the state's Bureau of Rehabilitation's professionalism and excellent cooperation. They put the services of their department at our disposal. We won the national award in 1978 from the President's Committee on Employment of the Handicapped as employer of the year. I think Michigan's Bureau of Rehabilitation should have been recognized as the "outstanding advisor" to the employer of the year.

Vital to our efforts to begin hiring the handicapped was the recognition by the Bureau of Rehabilitation that:

- They must not try to push or try to rush us into any program. Patience with us was their byword.
- This was a two way learning process.
- Michigan Bell could not wear its heart on its sleeve and could not afford to run a welfare program, nor did the Bureau of Rehabilitation expect us to.

- Employment of the handicapped was just one of many equal opportunity concerns in our company. Other critical areas, too, were demanding our attention.

Today, I can say that hiring the handicapped at Michigan Bell is an integral part of our regular routine. It is easy. We no longer need the Bureau of Rehabilitation to hold our hand.

When a business establishes a new program, especially a program such as hiring the handicapped, the most important ingredient for success is the support of the company president and the officers. I had that, and I also had their mandate to prepare a corporate policy statement on the hiring of the handicapped and to establish procedures for processing and placing handicapped applicants.

The Bureau of Rehabilitation staff helped us write the policy and the procedures. I strongly recommend that policy and procedures be the first steps, along with those mentioned earlier.

What is in a corporate policy statement and procedures? I'm not going to quote either in their entirety. But I do want to convey a sense of the corporate commitment and concerns.

POLICY

First, our policy statement begins with a commitment.

> Michigan Bell recognizes that it has a corporate responsibility to the communities that it serves and to the State of Michigan to do its part in the employment of the handicapped. This responsibility must be consistent with other corporate objectives, such as the provision of reliable, efficient telephone service and the provision of suitable employment for employees already on the payroll who may become handicapped.

The commitment is followed by a definition of handicapped, and a statement on placement:

> The assignment of a handicapped person to a job should be based on what the person has to offer, not what he or she has lost or might lack. Proper placement means using the "whole person" concept... evaluating the candidate on the basis of his or her total capacity, experience, training, aptitudes, skills, and physical qualifications. All of these factors must be considered in order to place the handicapped person in a job where the impairment does not interfere with job performance.

Finally, the policy itself:

> It is the policy of Michigan Bell Telephone Company, consistent with our other equal employment responsibilities, to provide equal employment opportunity to handicapped individuals (disabled veterans and veterans of the Vietnam era) who are qualified for jobs which are within their capabilities to perform in a manner safe to themselves, their coworkers, and the general public and consistent with efficient operation of the business.
>
> Furthermore, no individual will be discriminated against because of a physical or mental handicap that does not affect his or her ability to perform the job. The employment and advancement decisions will be based solely upon the objective determination of each candidate's job qualifications.

PROCEDURES

The policy is fine, but procedures are necessary to be certain the policy is implemented. Following are some excerpts from our procedures.

> Centralized employment has the primary responsibility to carry out the company policy on employment of the handicapped.
>
> In carrying out the company policy,

centralized employment must remain aware of other corporate policies and practices in the employment area. All equal employment priorities and procedures must remain in full force. Provisions for taking care of present employees who become handicapped must continue. And the overriding objective to provide reliable, efficient telephone service must be considered along with other legal and procedural requirements.

The selection of handicapped applicants will follow normal procedures as much as possible. They will be expected to meet most of the regular employment criteria, i.e., aptitude tests, skills such as typing, permanence, etc. However, in order to do this with reasonable efficiency and to minimize possible adverse effect on the applicants and the departments, it will be necessary to work closely with the Bureau of Rehabilitation.

The mark of proper placement is when the impaired person is no longer occupationally handicapped. It will be the objective of the employment interviewer and the Bureau of Rehabilitation representative to match personal abilities with job requirements so that the handicap is not job affecting. The assignment of a handicapped person to a job should be based on what the person has to offer, not on what he or she has lost or might lack.

The translation of words into action was critical. At the outset the Bureau of Rehabilitation and I agreed that we should advance slowly. We would build on our successes. So, at the beginning we were very careful about our placements. If our department managers felt that our program for hiring the handicapped was impeding good service or significantly affecting profits, it could have taken perhaps one or two decades to come to the point that we have reached in just 5 years.

PRESENT STATUS

Where are we today? We have nearly 400 newly hired handicapped persons on our payroll. In 1978 alone we hired 132 handicapped persons for nonmanagement jobs and 8 more for management positions. On an annual basis, our placement of the handicapped represents about 5% of our total hires.

In our computer records are 20,000 pending job applications statewide. About 250 of the applicants are identified as handicapped. These figures indicate that patience must be a virtue of our applicants. Some have waited as long as 5 years to be hired. That same patience must apply to handicapped applicants. Their applications receive the same consideration as all others. There is only one additional piece of information on their applications -- the nature of the handicap. Normally, we offer jobs to qualified people on a first come-first serve basis.

In addition, we must take into consideration multiple legal requirements, especially with respect to age, sex, or minority discrimination. Our challenge is to blend all of these elements and to maintain a posture of fairness to all and to be certain all jobs are open to everyone.

We have no so called "handicapped jobs." We match qualifications to the job requirements. The handicap is just one more factor -- a factor for which we may have to make reasonable accommodations. A handicap is considered after it has been determined that the applicant is qualified.

We will not, nor can we afford to, relax our standards because of a handicap. We are in business to give good telephone service and to make a profit. Without that profit, we would not have jobs to offer. There are many qualified handicapped people. We know that from experience and from studies we have made. Our studies show that the handicapped person's job

performance, that is, quality and quantity of work, is on a par with that of the other employees, and he or she is apt to have a slightly better attendance record.

Our new hire retention rate for employees is about the same whether or not there is a handicap. Of those placed, 80 to 85% succeed. The advancement of handicapped employees in the company is at a comparable rate with other new employees.

Incidentally, it is important that we have the facts I have just cited. They are objective evidence that our hiring of the handicapped program is working and can be effectively used to put to rest the occasional concerns of officers and other managers in the business.

It should be mentioned that we are not hiring the large numbers of people that we did in previous years. Like other employers, mechanization is reducing the number of entry level jobs. As our work force declines and machines replace people, the remaining employees become more critical to us. Further, we count on filling most of our higher level nonmanagement jobs from within our ranks. The same is true of management jobs. Of our first level management openings 80% are filled by nonmanagement employees. We are counting heavily on our handicapped employees to move up in the business, too. When accepted, we hope they are looking for a career, not just a job.

Almost all of our new employees must be trained within the business for skills that are unique to the telephone company. Therefore, we are looking for people with a certain level of ability to learn. Applicants are given general learning ability tests to help determine qualifications. We are not always looking for comprehension skills of 12th grade or above. In fact, we find approximately 10th grade norms for reading, math, and comprehension to be satisfactory for entrance into the business.

We have not had to make many accommodations for the handicapped. As indicated in our procedures, there may be a visit to the work location and discussions with the supervisor before placement. We may raise or lower a desk or other office furniture. We have provided interpreters for training deaf employees when needed as well as installed special signals for them.

When we hire a physically disabled person such as a wheelchair user, we check out that person's ability to get to the work location, the cafeteria, restrooms, and move between floors and through the corridors. These considerations caused us to spend over one quarter million dollars last year to provide barrier free access in our buildings.

There is one other plus to this program -- our nonhandicapped employees' acceptance of it. They are proud of what we are doing.

One of the purposes of our film Everyday Champions was to inform our employees of the program and prepare them for the possible placement of handicapped people in their work groups. Our feedback is that it did much more. We gained a lot of points when measuring employee attitude toward management of the business.

We have also been amazed at the very positive reception of the film by outside groups and the many copies that have been purchased or borrowed by agencies and other businesses. The film has been a good public relations tool. But, more importantly, the film has helped handicapped persons all across this country find gainful employment.

The film and our award as employer of the year have placed us in the spotlight. Now, more than ever, we cannot afford to let up and we do not intend to. However, we would like to see more businesses with real hiring the handicapped programs.

SUGGESTIONS

I am going to make some suggestions

from my perspective as a businessman.

First, get out and meet business people. Seek out the key people in companies who can implement an employment program. Have some success stories for them. Use ours if you wish.

When you meet with business people, remember that they are business people. Their first concern is to make a product or provide a service. Some of them may say, "I already do enough by supporting United Way agencies." Your response is, "Yes, and your support has helped us prepare men and women who can be a valuable, productive labor source for you.

Do not push. Be patient, but be ready to respond rapidly when a business person nibbles at your bait. The chances are that ultimately he or she will respond. Offer to help with policies and procedures or in whatever way you can. Be willing to visit work locations and make suggestions. Meet a business person in his or her own environment.

Be realistic. Try to keep in mind the business person's perspective. Do not quarrel over individual rejections or failures. Business people will have sound reasons that perhaps you are unable to understand. Accept them. The business people know what they are doing, or they would not be in business.

Businesses are at different levels of maturity when it comes to accepting the handicapped. You must be sensitive to this. You must adjust any presentation or proposals that you have to match that maturity. So, before you rush into a business, do your homework. The more professional you are in your contacts with the business, the greater your chance of success.

Finally, after you have told the business person all the advantages of hiring the handicapped, do not stop there. Ask him or her to buy. You are a salesperson. Learn how to close the sale.

CONCLUSION

My personal satisfaction from this activity cannot be measured or adequately expressed in words. It is enormous. I am very proud of Michigan Bell's program. And I am very willing to share my views and experiences with educators, business people, or rehabilitation workers.

I am impressed with you professionals -- your concern and your dedication. It is difficult to get businesses to hire the handicapped, but it is beginning to happen. The movement is growing. Apprehension and ignorance are on the decline. Understanding, opportunity, and enthusiasm are on the rise.

I hope that what I have presented will be of some help to you and that we can consider the time spent as another small step toward opening the doors.

MOM AND DAD CAN HELP: PARENTS' ROLE IN CAREER EDUCATION FOR THE HANDICAPPED CHILD

Stanley F. Vasa
Allen L. Steckelberg
Gary Meers

The parent education program model discussed in this paper was developed to meet the objectives and intent of a Bureau of Education for the Handicapped demonstration grant. One of the goals of the grant was:

> To develop a resource implementation assistance package for use by special and vocational educators in acquainting parents of handicapped learners with employment opportunities and requirements demanded by industry.

An integral part of the package is a model parent education program which is intended for use by special and vocational educational teachers in working with and guiding parents of the handicapped. This model has three basic assumptions about parents and the parents' role in education.

1. Parents care more about their children than school personnel.
2. Parents have a right to know about and be involved in their child's education program.
3. Parents can be effective teachers.

Parents care more about their children than school personnel. Educators can easily assume they care more for the child since they have formal written goals. They rarely see the child with his or her parents and often assume that because parents are not involved in the education program they do not care. In reality, the parent may lack the knowledge or feel insecure in working with educators. The parents are the only individuals who maintain a physiological and psychological vested interest in their child. School administrators and teachers must view each child in terms of the other students, the curriculum, the cost of education, and other concerns that do not relate to the best interests of the particular child. For example, when making a decision about programing for a handicapped child, it is likely that educators may choose the alternative that requires less time, energy, or money and, therefore, leaves a greater amount of available resources for the majority of the students.

Parents have a vested interest in their child and the ultimate legal and moral responsibility. Historically, the task of educating children has been the function of the family unit. Only in the last century have public school personnel assumed this responsibility. Since the advent of the public school, parents have become more and more removed from direct involvement in their child's education. Recently, due to advocacy groups, judicial decisions, and legislation (specifically Public Law 94-142), this responsibility has been reasserted by parents. This responsibility implies parental influence on their child's school education. The establishment of due process pro-

cedures demonstrates the rights of parents in the education of the handicapped child.

Parents have a right to know about and be involved in their child's education. Parents have legal rights to be informed of what takes place during the time educators have assumed the responsibility for their child. Parents can be and should be provided with information that allows them to make significant contributions to their child's education in the identification process, programing for the child (the IEP process), and providing meaningful activities and support in the home.

Open communication must be established between the parents and the schools in order to involve parents in their child's education. School staff members must promote this communication and provide parents with the information to make the parent-school partnership a positive one. Typically, information and resources have been provided to parents through parent conferences, IEP staffings, and written communication. More formal parent education programs will be needed in the future to further open communication and to achieve better programing for individual students.

Parents can be effective teachers. This assumption has been well supported in literature (Berkowitz & Graziano, 1972; Denhoff, 1960; Kelly, 1973; MacDonald, 1971; Walder, Cohen, Breiter, Boston, Hirsch, & Leibowitz, 1971). Teachers, particularly those who work with exceptional children, are often viewed as having magical abilities and large amounts of patience. In reality, teaching exceptional children is a matter of knowledge and skills. It is not necessary that parents delegate complete responsibility for the education of their child to the school, nor is it possible. Parents can effectively support the education of their child if they are provided with information about important goals for their children and training in techniques for the achievement of these goals. The school personnel are the best source of information for parents about teaching. It is important for the school to provide parents with information about training through both formal and informal contacts. Inherent in the lack of formal interaction between the school and the parents is the danger that the school personnel may underestimate the potential parents have in making positive and rewarding contributions to their child's education.

Exceptional children do not need to be taught solely by "experts" in special environments. In fact, these children can and are learning outside the confines of school walls or special classes. The career education movement has contributed significantly to opening the eyes of educators to the resources available outside of the school. Parents are in a particularly advantageous position to use these outside opportunities to expand their child's education. With the aid of teaching skills, such as establishing behavioral goals, utilizing systematic reinforcement, and identifying successful and unsuccessful teaching techniques, parents can provide home and community experiences that contribute to their child's learning.

From these three assumptions it is evident the parents of the handicapped individual deserve and have the right to take an active role in the education of their child. The parents' role in this context may be viewed as threefold. First, parents become advocates for their child in the formal educational system. Second, parents assume the role of teachers. In this role, the parents seek to provide activities and opportunities that are purposeful and rewarding learning experiences for their child. In the third role, the parents are models for their child. The parents encourage their child through demonstration of appropriate attitudes and habits appropriate to adult life skills. If parents are to maximize their child's learning, they need information and resources that will allow them to satisfactorily fulfill these roles.

PURPOSE OF THE PARENT EDUCATION PROGRAM MODEL

The purpose of this program model is to provide parents with information designed to assist them in assuming these roles in their child's career development. The model provides information to answer the following questions:

1. What is career education?
2. How can parents support their child's education in school?
3. How can parents enhance their child's career development at home?
4. How can parents support their child in the job selection and procurement process?
5. What are information resources for parents in the career awareness, training and decision making process?

What Is Career Education?

The parent education program model operates under the premise that the parents will become active partners in their child's career education. If this is to occur, parents must have a working knowledge of career education. The objectives include knowledge of a conceptual definition of career education; a rationale for the existence of career education; basic theories of learning and career development; the long and short term goals of career education; career education's relationship to the curriculum; and career education's relationship to employment. Information is presented as unique to handicapped individuals on a pragmatic level. The basic theories, constructs, and goals of career education do not differ for handicapped individuals.

Providing parents with a basic conceptual overview of career education serves as a fundamental component of the program. The remaining subsections of the program apply this basic framework to information of a specific and pragmatic nature. The overview is intended as the initial step in helping parents establish goals for themselves and their children. Parents become most effective in their roles as advocates, teachers, and models, in the career development process after establishing specific goals.

How Can Parents Support Their Child's Education in School?

One of the roles the parents of the exceptional child assume is that of the advocate. Parents assume this role when they actively support the child's education in school. This component provides parents with information about being effective advocates.

It is important to point out that the role of advocate is not synonymous with opposition to school programs. The function of the advocacy is to ensure that the best interests of the child are being taken into consideration. The interests of the child may most often be served by close cooperation between the parents and the schools. For this reason, the initial objective of this component reiterates the rationale for the parents' commitment to their child's education and career development.

The second objective of this component is to provide the parents with information concerning federal and state legislation that is relevant to the education and placement of handicapped individuals. The information is extremely important to protect the parents' rights in ensuring an appropriate education for their children. This includes information about Public Law 94-142 and Public Law 94-482 as they relate to identification procedures, the individualized education program, and due process procedures. Information is also provided pertaining to the rights of the child and of the parents. This includes familiarization with Public Law 93-112, Section 504, as it relates to schools and legislation, and the Buckley Amendment, which pertains to school records. The activities within the objective seek to arm the parents with the necessary information to allow them to ask for

and receive services that are consistent with the requirements of the law and the unique needs of their child. Although this information may appear to threaten the school, it should not. The policy of keeping the parent uninformed is not a wise one. In the long run, the policy can often lead to parent misunderstanding and hostility toward the school.

The third objective of this component is oriented toward providing parents with knowledge to aid them in making a positive contribution to their child's career development in school. The information presented addresses the parents' roles in educational staffings and parent-teacher conferences. It includes facts about:

1. Staffing procedures.
2. Identifying parents' responsibilities and potential contributions to the staffing.
3. Offering specific suggestions to aid parents in observing their child.
4. Reporting their observations.
5. Identifying their child's needs.
6. Suggesting accommodations.
7. Defining career education goals for their child.
8. Suggesting ways that parents can serve as a resource to the school.

How Can Parents Enhance Their Child's Career Development at Home?

Parents make a major contribution to the education and socialization of their child through the home environment. Parents have the earliest and the most numerous contacts with their child. They assume two important roles in their child's development. They serve first as models for their child and, secondly, as teachers.

Parents serve as the initial model for nearly all of their child's behaviors. The child receives his or her first stimulation for speech and communication from interaction with parents. Likewise, parents provide the child with awareness of work related roles and their own occupations. It is important for the parents to realize that the image or model they portray plays an important role in the future decisions of their child.

Parents also serve as the child's first teacher. They provide the stimulation and parameters in which learning occurs. Parents control the environment for the young child and, to a lesser extent, as the child matures. Basic life skills and attitudes are taught by parents through both modeling and actual training. Parents play the initial role as teachers in the career development process through the establishment of these life skills and attitudes.

A key factor in the success of parents fulfilling these roles is the establishment of clear goals for their child. An emphasis of this component is to review and apply the description of career education presented in the initial component to setting goals for their child. A second emphasis is on providing parents with a knowledge of how to structure for success, apply behavioral techniques, and determine if they have been effective.

The third emphasis is on providing parents with specific strategies, techniques, and activities designed to meet career development goals. As a corollary, parents are also provided with suggestions for dealing with common problems that may arise.

How Can Parents Support Their Child in the Job Selection and Procurement Process?

The efforts of the school and the parents are, or should be, directed toward maximizing the handicapped individual's career success. Career education received its first real empirical test with the job selection and procurement process. Traditionally the schools have not played a major role in the transition of the child from school to work; therefore, the

handicapped adolescent and his or her parents are virtually left to their own resources in selecting and procuring a job.

This component of the program seeks to serve two purposes. First, it seeks to provide information to aid parents in supporting their child in selecting and procuring a job. Second, it relates the goals of the previous components to the culmination of the process. Information is provided under the following topics:

1. Specifying legal rights of the handicapped in employment and business compliance with applicable legislation.
2. Identifying available services to aid in the job selection and procurement process (US Employment Service, Vocational Rehabilitation).
3. Assessing readiness for work.
4. Identifying available jobs.
5. Identifying employment assets and job skills.
6. Identifying the skills and assets in which the employer is interested.
7. Presenting assets and skills to the potential employer.
8. Suggesting accommodations to the potential employer.
9. Following up on the application.
10. Important first steps after getting the job.

What Are Information Resources for Parents in the Career Awareness, Training and Decision Making Process?

The purpose of this component is to provide parents with information that will allow them to identify and use locally available resources in their roles as advocates, models and teachers. The model uses representatives of the various agencies, when possible, to explain their organizations' functions in aiding the handicapped child and/or the parents. In addition, suggestions are provided to parents on the use of these organizations or agencies.

A second important element is a resource guide designed as a reference to the use of other major organizations and agencies that provide information or services to handicapped individuals.

PROGRAM DELIVERY SYSTEM

After having identified the informational needs of parents and established the objectives of the program, the next task is to design a delivery system. The delivery system delineates what activities or materials will be presented, how they will be presented, where they will be presented, and who will present them. The delivery system is a key factor in the success or failure of the program. The information must be presented in a manner that maintains the interest of the participants and also allows them to learn as effectively and efficiently as possible. It also must provide a means for special educators and vocational educators to be successful in parent education.

In establishing the delivery system, several principles need to be considered about effective parent education programs. The statements should be taken as elements to review when planning for career educational programs for parents.

Programs Should Be Goal Directed

All programs for parents should involve a specific purpose and a delineation of what outcomes are expected. Parents need to know what will be expected of them and what they can learn from the sessions.

Programs Should Be Limited in Duration

A major planning consideration is determining the minimum amount of time needed to achieve the program objectives. There is an optimal amount of time during which learning occurs most efficiently. Long periods of instruction begin to compete with fatigue, boredom, and other priorities for the attention of the audience. This is particularly important when the audience is not accustomed to participating in formal

learning situations.

Program Resources Are Limited

It is necessary to realize that resources in career education for use with parents are limited. Media and published materials may not be readily available to the educators. It may be necessary to adapt and carefully examine school resources. The proper use of professional staff in meeting the objectives of the model is a key factor.

Programs Must Be Viable and Parent Oriented

Each parent differs in specific needs, interests, and background information. The appropriateness of the information presented influences the strength of the parents' commitment to the program and its goals. Planners need to be aware of the wide variety of ways to convey information to parents. The system should allow parents to take advantage of the numerous alternative ways of obtaining information.

Programs Must Be Amenable to Evaluation

It is necessary to insure that the objectives and goals can be measured. Educators need data to support the effectiveness of the components of the program.

There are some basic tenets to consider in dealing with parents in providing career education programs. Parents enter educational experiences with apprehension and a number of concerns. It is important to consider that parents:

1. Have set habits and philosophies about child rearing.
2. Have pride.
3. Have developed a certain amount of resistance to suggestions from authorities.
4. Have other interests and responsibilities.
5. Are often bewildered by all of the options available to them.
6. Have frustrations and concerns about services previously rendered to their children.
7. Are suspicious of the school and its functions.
8. Have a limited amount of free time for inservice education.
9. Can assimilate a limited amount of information that is contrary to their individual philosophies.
10. Have creative ideas and experiences.
11. Are secretly afraid of failing in the rearing of their children.
12. Have developed behaviors consistent with their values, attitudes, and beliefs.
13. Do not like to be talked down to or belittled for their failures.
14. Have decisions to make and problems to solve.

Because these tenets and the previously mentioned considerations play such an important role in the success of a career education program for parents, they have been included in the user's manual that accompanies the program model. This manual offers suggestions to program planners on:

1. Establishing rapport with the participants.
2. Collecting, selecting, and sequencing activities.
3. Providing feedback to participants.
4. Evaluating parent program success.
5. Modifying the parent education program model to meet local needs.
6. Listing resource materials.

The parent education program is delivered in five units based on the areas of information identified earlier. Each of the units contains activities designed to establish rapport, pre-post tests, and specific information about needed resources. The units include parent involvement activities. Evaluation of each unit is based on parent reaction to the program and pre-post test results.

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PART VI

Preparation Of Training Personnel

EFFECTIVE MAINSTREAMING:

HOW TO DO IT!

Catherine Batsche

Mainstreaming has become a controversial issue in vocational education. Implementation of the concept in local schools has resulted in many abuses of handicapped children, parents, and classroom teachers. It is no wonder that one author chose to describe her school's efforts as "Mainstreaming: One Step Forward, Two Steps Back."

However, one must be careful not to confuse faulty implementation of a potentially sound idea with the concept itself. There are benefits to be derived from mainstreaming handicapped students, particularly in the field of vocational education. The procedures used to implement mainstreaming are critical to the effectiveness of the program both for students and for teachers.

PROGRAM COMPONENTS

Since its beginning four years ago, mainstreaming has been a primary premise of The Illinois Network of Exemplary Occupational Education Programs for Handicapped and Disadvantaged Students. Through its experience, the Network staff found that three components were essential in order for mainstreaming to be effective: systematic planning, inservice education, and cooperative instructional arrangements. Each of these three components will be discussed throughout this paper. It should be pointed out that the Network developers did not consider mainstreaming to be defined simply as the placement of handicapped students in regular vocational classes. Rather, mainstreaming was considered to consist of a continuum of instructional environments ranging from the regular classroom (or community work placement) to the residential school for the severely handicapped. Between the two extremes there are many alternatives. Effective mainstreaming requires the determination of the most appropriate placement for each student.

Systematic Planning

It has been suggested that education has traditionally suffered from a lack of long range planning. The crisis management approach to administration has certainly been evident since the implementation of Public Law 94-142. Many school administrators have found themselves without the structure and tools necessary to meet the demands of the legislation. The need to comply with legislative mandates has often taken higher priority than the systematic planning and inservice education necessary to result in actual compliance. As a result, some schools have been left with a hodgepodge of acronyms (e.g. IEP's, FAPE, LRE, MDCC); a stack of new paperwork; a hostile, fearful, and confused staff; and very little mainstreaming.

In order to avoid some of these pitfalls, The Illinois Network staff reviewed several materials that might be helpful to administrators and teachers. One of the materials reviewed

was Instructional Development For Special Needs Learners: An Inservice Resource Guide (Phelps, 1976). The Phelps materials consist of a series of seven inservice modules designed to help teachers improve the quality of individualized education programs (IEP's) at the secondary level. The major asset to the modules is that, taken collectively, they provide a systematic approach to program planning, implementation, and evaluation. The module topics are as follow:

Module 1: Learner Identification and Analysis
Module 2: Cooperative Instructional Arrangements
Module 3: Instructional Resources
Module 4: Cluster and Content Analysis
Module 5: Instructional Planning
Module 6: Instructional Implementation
Module 7: Evaluation of Learner Progress

The modules are preceded by a Self Directed Needs Assessment that can be completed in approximately 10 minutes. The results of the Needs Assessment can then be used to select the inservice/planning modules most appropriate to the identified need. Each module consists of (a) an introductory statement, (b) case studies describing special needs students and their teachers, (c) module goal statements, and (d) one to four inservice experiences. Ideally, each activity would be completed cooperatively by a vocational teacher, a special education teacher, and other appropriate personnel (e.g., guidance counselor, administrator, reading specialist).

This systematic approach was the process used in a series of 13 regional workshops in Illinois. Approximately 600 persons attended the workshops, many in teams consisting of vocational educators, special educators, administrators, and counselors. The workshop participants engaged in a variety of activities based on their needs. Each participant, or team, completed an Action Plan at the end of the workshop. The Action Plan was a simple four step process in which participants identified their needs, selected a workshop material or idea, and outlined a course of action designed to implement and evaluate the idea. Participants were encouraged to use the systematic process in inservice sessions when they returned to their local districts.

Inservice Education

The necessity to provide a systematic inservice program for vocational staff cannot be overemphasized. Inservice sessions can provide the opportunity for staff to express their fears and concerns, to obtain needed information, to learn new techniques, and to dispel some fallacies about the handicapped.

It has been suggested that inservice programs should be designed so that participants are doing during inservice what they should do after the inservice. Therefore, if individualized instruction for special needs students is a goal, inservice activities should also be tailored to the individual needs of the staff member. The Self Directed Needs Assessment developed by Phelps can be used to provide the basis for individualized inservice programs. The content of inservice programs can then be designed to provide the alternative necessary to meet individual needs as well as the general activities needed by the entire group.

It has been the experience of the Illinois Network staff that the most challenging aspect of inservice program is the development of participant attitudes which are favorable to working with special needs students. It has often been expressed that vocational education teachers view special educators as "overzealous advocates who want to come in and take over my program." On the other hand, it is not unusual to hear special educators complain that "those vocational educators think too narrowly to make curriculum adjustments and revisions for special needs students." Attitudes such as these need to be brought out into the open, clarified, and resolved

so that cooperative instructional planning can be facilitated.

Several techniques have been used within the Network to facilitate attitude development. One method, the Nominal Group Technique, is designed to give participants the opportunity to express their views in a short, structured period of time. Mutual goal setting and priority development are the anticipated results of the process. Priorities determined by the group can be used to plan further inservice activities.

Films were also used by the Network staff to promote attitude development. Films can serve as invaluable tools for inservicing an entire school staff and student population. Through films, messages can be communicated relating to people, problems, and possible solutions.

Several unique films have been identified that can be used as a part of a formal inservice program such as a workshop or institute day presentation. They can be equally effective when used informally, for example, during school lunch periods. A list of films is available from the author upon request.

Another aspect to consider when planning inservice programs is the type of incentives that might promote implementation of the concepts learned during inservice. A survey has been developed that can help local administrators identify incentives appropriate for their staff. Some examples of incentives used within the Network include mini grants, university credit, release time, coffee and doughnuts at inservice programs(!), and popcorn during informal film sessions.

Cooperative Instructional Arrangements

It is crucial that handicapped students receive needed support services in vocational education programs. Two types of supportive services should be identified: In school resources and community resources. Commonly used in-school resources include (a) career related instruction, (b) special or supportive instruction such as a classroom special education teacher, (c) special or supportive services such as a speech therapist or interpretor, (d) counseling, and (e) cooperative work experience instruction. Community resources for special needs learners are generally available from (a) federal, state, and local governmental agencies such as the Employment Service, (b) community agencies and organizations such as Goodwill Industries (c) business, industry, and labor organizations or associations, and (d) citizen or special interest groups such as the Lions or Kiwanis Club. Citizens Advisory Councils can also be useful in providing information and assistance to special needs learners.

One problem for vocational educators is that they often lack the information concerning the supportive services available within their school district and community. A simple listing of the contact person, responsibility, location and phone number, and description of the services available for each resource can be an aid to the vocational teacher in using supportive services.

Once these services have been identified, a cooperative instructional arrangement should be developed that specifies the services needed by a student and the person(s) who will be responsible for providing the services. Student goals and objectives developed cooperatively by vocational teachers and special teachers are more likely to result in instruction appropriate for the student.

CONCLUDING REMARKS

It is hoped that the suggestions in this presentation will result in more effective implementation of the mainstreaming concept. Several materials that may be of assistance to the reader are available at no cost or on a free loan basis through the Illinois Network:

- Instructional Development of Special Needs Learners: An Inservice Resource Guide, (Phelps, 1976).
- Focus on Films. (Brochure)
- A Continuum of Staff Development/

Inservice (Brochure).

- Guidance and Support Services (Brochure).
- Mainstreaming: It Works! (Slide tape program available for 3 week loan).
- Mini Grants and the Nominal Group Process (Brochure).

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PREPARING VOCATIONAL ADMINISTRATORS TO WORK WITH HANDICAPPED STUDENTS

Carl T. Cameron
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During the past five years, the special education and vocational education faculties at the University of Florida have teamed together for inservice training of vocational educators. Hundreds of vocational teachers have attended three week summer workshops and various other training seminars. This training concerned the techniques necessary for meeting the needs of handicapped students in vocational classes. The improvement of attitudes concerning handicapped students was also an important component of the classes and workshops.

Feedback and evaluation of the training often pointed out one of the teachers' primary concerns - that their administrators did not show positive attitudes about, or sufficient awareness of, handicapped students. With an Education Personnel Development Act Grant, the University of Florida established a series of workshops to help meet the needs of administrators. The one day workshops were presented in each of Florida's five vocational regions. The following is a summary of the development, implementation, and evaluation procedures, and results of these workshops.

PROGRAM DEVELOPMENT AND IMPLEMENTATION

An initial needs assessment investigation and verification procedure led to the selection of program components. These program components were modified throughout the verification process, resulting in the components listed on the following agenda.

WORKSHOP SCHEDULE

Morning Session

Introduction and Overview

Issues in Special Needs/ Vocational Education

Program Placement Options

Student Assessment and Placement

Curriculum Modification

Afternoon Session

Curriculum Modification (continued)

Model Programs

Update from the State Division of Vocational Education

Wrapup

Issues in Special Needs/Vocational Education

The initial component involved the current issues in vocational education for handicapped students. The

presentation was developed as follows:

1. The production of an introductory multi-image slide/sound presentation featuring vocational and special educators discussing constraints to implementing programs. This 12 minute production was developed by project staff in cooperation with production specialists.
2. A discussion of the issues as perceived by a special educator. Issues presented were (a) communication, (b) cooperation, (c) training, (d) funding, (e) mainstreaming, (f) leadership, (g) work evaluation, (h) deinstitutionalization, and (i) commitment.
3. A discussion of the issues as perceived by a vocational educator. Issues were examined as they affect teachers, employers, and administrators.

   (a) Teacher issues include the need for professional training to deal with the new population; lack of planning and development time, the need for a reward system that recognizes work with special students; placement and follow up on the job; safety and liability in the classroom, laboratory, shop, and job location; and curriculum materials.
   (b) Employer issues include performance standards, profit needs, and supervision responsibilities.
   (c) Administration issues include vocational teachers' need for special education training, special education teachers' need for vocational training and certification, special needs programs are not vocational but only handicrafts, and cost factors including funding formulas, additional staffing, architectural barriers, and special equipment needs.

Materials provided include:
Administrative Constraints in Implementing Vocational Programs (McKinnon, 1977).
Issues in Vocational/Special Needs Education (Cameron, 1978).
Doing Our Share: Florida's effort to provide vocational education for the handicapped (Corley, 1976).
A Master Plan for Students with Special Needs (Wheeler, 1978)
Staff Development for Teachers of the Handicapped (Fowler & Midgett, 1978).

Program Placement Options

Using a discussion format, the following program placement options were presented: (a) no vocational program, (b) separate facilities, (c) shared programs, (d) regular secondary/post secondary programs (separate facilities/classes and mainstreaming).

Materials provided include:
Bibliography.
Education of All Handicapped Persons. (Tindall, 1977).

Student Assessment and Placement

The role of assessment and placement has become an increasing concern to special and vocational educators. With passage of recent legislation (Public Laws 94-142 and 94-480) the role of vocational education in this process is expanding. This session was designed to familiarize the participants with the staffing process as developed in special education, provide a series of steps by which vocational educators can be valuable contributors in that process, and to discuss some key provisions on the due process provisions required.

Materials provided include:
Developing an IEP (handout)
Due Process and Confidentiality (handout)
Individualized Education Programing at the Secondary Level (Cegelka & Phillips, 1977)
Personnel Who May Be Included on a Staffing Committee (handout)
Retardation Office (handout)
The Role of the Vocational Educator in the Staffing Process (Cameron, 1979)

Vocational Education's Suggested Roles in the Staffing Process (handout)

Curriculum Modification

The exploration of curriculum modification was developed and presented to (a) develop skills of the participants to share with teachers in their district and (b) assist the participants in gaining a perspective for communicating with teachers' problems in working with handicapped students. Using lecture, audience participation, and demonstration, the participants developed a list of various learning styles, discussed equipment adaptions, and shared ideas on support services available both in and out of the school setting.

In addition, emphasis was placed on participants sharing problems with allocation of time, money, and human resources to implement these modifications, which in turn may have provided new perspectives.

Finally, a short presentation was developed and presented demonstrating currently available commercial materials, methods for adaptation of existing materials and teacher made materials. A criterion for evaluation of commercial materials was also provided.

Materials provided include:
Job Employability Skills for Special Educators (Florida Learning Resource Center, 1975)
Case Study Summary
Performance Objective
Commercial Literature

Model Programs

This component of the workshop was designed to provide exposure to quality programs for handicapped students in vocational situations. The materials and presentation were developed as follows:

1. Initial probes were initiated focusing on a wide variety of professionals in Florida who deal with handicapped adolescents. They were asked to identify the best programs in vocational education for the handicapped.
2. From the list of recommendations, each program was contacted requesting additional information and determining a date for orientation discussions.
3. At the on site visitation, the possibility of using the program was discussed.
4. Two programs were selected for audiovisual production. The programs selected were the St. Augustine Technical Center Special Needs Program (St. Augustine, Florida) and the Sarasota County Student Center (Sarasota, Florida).
5. A slide/sound (multi-image) presentation was produced and developed through the cooperative efforts of project staff and the model program personnel.
6. Both model program presentations were shown at all the workshops. In addition, criteria for selection were discussed.
7. Representatives from both model programs were at all workshops to make a short presentation and answer questions.

Materials provided include:
Criteria for Model Programs (handout)
Model Program: St. Augustine Technical Center (Cameron, 1978)
Model Program: Sarasota County Student Center (Cameron, 1978)

Update from the State Division of Vocational Education

The final component of the workshop was designed to provide participants with up to date information from the Division of Vocational Education on the latest special needs legislation, regulation, and related areas. In addition, the time was used to provide responses to questions which were solicited during the day and reviewed by the presenter prior to this update.

TABLE 1. Results of Workshop Evaluations

	Statement	Agree	Undecided	Disagree
1.	The objectives were clear.	102(.95)*	3(.03)	2(.02)
2.	The objectives were realistic.	101(.96)	4(.03)	0(0)
3.	The objectives were accomplished.	96(.91)	9(.09)	0(0)
4.	Following presentations were valuable:			
	a. Issues in vocational/special needs programs	94(.92)	6(.06)	2(.02)
	b. Program options	87(.90)	10(.10)	0(0)
	c. Student assessment	87(.83)	15(.14)	3(.03)
	d. Curriculum modification	93(.89)	9(.09)	2(.02)
	e. Model programs	102(.94)	5(.05)	1(.01)
	f. Update from the State Division of Vocational Education	96(.91)	7(.07)	3(.02)
5.	Materials provided will be useful	104(.96)	3(.03)	1(.01)
6.	My time was well spent.	101(.94)	3(.03)	3(.03)

*Percent of total response for each item.

EVALUATION PROCEDURES AND RESULTS

Procedure

The evaluations were solicited at the completion of each workshop. A workshop evaluation form was developed to elicit (a) general and specific critiques of the workshop performance, (b) the specific presentations that were determined to be of most value, and (c) specific comments concerning the workshop. At the completion of each workshop, the evaluations were examined and compiled. Information provided was used to make minor adjustments to the workshop format between presentations.

Results

At the completion of the five workshop presentations, all evaluations were compiled. Table 1 is a summary of responses. The total number of responses for each item is also presented for each ranking. No attempts at statistical evaluation are intended by use of percentage data other than providing a common unit of comparison for each question. This tabulation suggests that participants were overwhelmingly pleased with all aspects of the workshop.

SUMMARY

After reviewing the evaluation materials, the project staff concluded that the workshops had accomplished the original objectives. Possibly the best feedback has come in the form of requests, both locally and nationally, to repeat the entire workshop and the allocation of additional funding for development and dissemination of media and materials. The project staff is interested in further development of materials to assist vocational administrators who serve special needs students.

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TRAINING VOCATIONAL TEACHERS TO WORK WITH HANDICAPPED STUDENTS IN A MAINSTREAM SETTING

John Gugerty
Lloyd Tindall

DEVELOPING VOCATIONAL EDUCATION FOR HANDICAPPED STUDENTS

The goal of the staff of the handicapped project at the Wisconsin Vocational Studies Center is to serve Wisconsin vocational, technical, and adult education teachers and community members who work with the handicapped. This goal is met by providing four services: (a) conducting inservice training for teachers, (b) developing materials, (c) collecting materials, and (d) disseminating materials.

During the past two years as a component of the inservice training project staff members have developed a course called Program Modification and Prescriptive Teaching for Handicapped Students to be taught in Wisconsin's vocational, technical, and adult education (VTAE) districts. The 12 session inservice course was piloted at the Milwaukee Area Technical College (MATC) January to March 1976 and has since been repeated at MATC and several other vocational technical institutes in Wisconsin, with several additional sessions planned around the state for the future.

The Vocational Studies Center staff works through VTAE district administrators and teacher inservice committees to design the course around specific needs of the teachers who will be in the class. The staff members are prepared to deliver instruction in ten disability areas and seven content areas, depending upon needs of the prospective class. A survey is used to measure teacher interest in inservice training on program modification and prescriptive teaching.

Teachers who express an interest in taking the class are asked to complete the survey (see Figure 1). This form asks for the specific disability areas and content areas of greatest concern to them. It also asks for specific goals, objectives, and problems which teachers hope to solve by taking the course. By summarizing the survey responses and developing a composite profile of teacher needs, project staff members obtain sufficient information to construct a tailor-made curriculum for teachers who will be enrolled in the course. The survey provides an indication of the disability and content areas that concern the prospective class members. It also indicates their level of awareness of the needs of handicapped students. Usually the top four or five disability areas and the top three or four training areas are selected for inclusion in the course.

By following this process, the staff identifies the needs of individual participants and sets an example of individualization to meet student needs. Teachers desiring information in areas not selected for major emphasis will be given materials, handouts, and individual help to solve the problems

they may be having in teaching specific handicapped students. A model outlining the development of an educational prescription is presented at the first class session to initiate the prescription procedure that will be used to modify vocational courses (see Figure 2). As part of the inservice training, teachers are required to modify one of their courses for students in at least two disability areas.

DEVELOPING A PRESCRIPTION FOUNDATION

A physician would not hand out random prescriptions to patients in the office waiting room in hopes of curing each respective illness. Neither should such a shotgun approach be used by vocational educators in developing programs for handicapped students. Teachers must have adequate background information abc each handicapped student if they are to build appropriate vocational education programs for handicapped learners.

The information needed to make a good prescription is divided into two basic categories: (a) things to know before the class starts or early in the class and (b) things to consider after the class ends. The teacher needs to be aware of areas in the student's background that may yield information valuable in making the prescription. Some knowledge of the student's academic profile, especially reading ability, math skills, and learning modes, is necessary. A review of the student's independent living profile will provide information about his or her ability to get along with peers, money management ability, safety and health situations, transportation situation, and other aspects of independent living. The student's vocational profile will give clues to his or her job skills, work experience, interests, and aptitudes.

The teacher must also look ahead with the student to the postclass environment. What employment skills will be needed? Will the student need a special job or a redesigned job? In thinking of followup plans, will job supervision, support services, or advanced training be required? The student may be headed toward a nonemployment status. If nonemployment is the case, what will the next step be? Will it be more education or some support service? All this information may not be needed. However, an attempt should be made to obtain enough information about the student to make a viable prescription. Sources of information include the student, school counselors, rehabilitation counselors, and parents.

When the necessary information has been gathered, the teacher is ready to make a prescription for the individual student. As an educational plan is prescribed for the student, the help the student needs outside the vocational classroom must be considered. Prevocational, academic, and support services may be necessary to supplement the vocational education plan. The teacher should ask for these services if they are needed. The prescription should include the tasks that are to be learned and the method for teaching the tasks or competencies. The prescription should include course modification plans. Modifications may include alterations in the course content, materials, physical environment, and teaching techniques. Although the prescription may be readily made, the course modification may require much time and effort. Prescriptions calling for individualized instruction, materials development, and physical modification in the classroom may not be completed during the current semester or school year. This does not mean that handicapped students must remain outside the regular classroom until the ultimate modifications are completed. Handicapped students are usually able to succeed in the regular classroom with modifications which are made before or during the early stages of the class.

Hopefully, the process of building vocational education for the handicapped will lead to competitive employment,

independence, and finally to the self esteem the handicapped justly deserve.

The remaining inservice sessions are devoted to preparing teachers to work with students having specific or multiple disabilities. Illustrations of this process as it relates to the educational needs of emotionally troubled, learning disabled, and hearing impaired students follow.

PREPARING TEACHERS FOR WORK WITH EMOTIONALLY TROUBLED STUDENTS

The ultimate goal of the prescriptive programing approach to the education and training of emotionally troubled students is to assist them in their efforts to develop a broader repertoire of personal living, interpersonal, and vocational skills, so that they can develop greater functional control over their personal, academic, work, and social environments.

A key determinant of the extent to which an emotionally troubled student will achieve these goals is the degree of success that he or she experiences in the vocational training environment. The student's chances of success in this environment are enhanced or hindered by the efforts of the teachers.

The inservice process designed to improve instructors' performance consists of four parts:

1. Awareness -- showing how important it can be to perceive the details of interpersonal interaction and respond appropriately.
2. Reassurance -- soliciting input from the class concerning their success experiences with emotionally troubled learners.
3. Problem definition -- spelling out the learning characteristics often associated with such students and examining those aspects of the teaching process for which modification should be considered.
4. Problem resolution -- presenting strategies designed to compensate for or overcome problems.

The awareness phase of the inservice is meant to sensitize participants to: (a) the necessity of paying close attention to the details of their own and their students' behavior; (b) the different modes of communication which individuals knowingly or unknowingly use; (c) the influence of role expectations on attitudes and behavior; and (d) the extent to which emotionally troubled people experience psychic pain, feelings of fear, anxiety, depression, alienation, and isolation.

The reassurance phase of the inservice process is designed to remind participants (a) that they have already successfully educated emotionally troubled students (who may not have been so labeled) and (b) that they have the teaching skills needed to do so even if they have yet to enroll students having emotional handicaps. The trainer solicits examples of successful classroom experiences with such students and reviews the skills in which the teachers are currently proficient.

The problem definition phase of the inservice process includes both a description of the learning characteristics that might be manifested by emotionally troubled and emotionally restored students and a review of categories that should be considered when modifying a course for such a student. An outline of these categories would include:

A. Assessment and evaluation results
   1. Do any exist?
   2. Are they available to me?
   3. Do I have the skill necessary to use them?

B. Students' employment goals
   1. Interests
   2. Aptitudes
   3. Prior work experience
   4. Current functional job skills
   5. Job skills needed -- number and type
   6. Supervision issues -- what is likely to be available versus what the person needs

7. Potential stress factors
8. Physical demands
9. Transportation

C. Occupational information
   1. Availability
   2. Accuracy
   3. Utility

D. Modification in the school's physical plant
   1. Classroom
   2. Labs
   3. Equipment
   4. Accessibility
   5. Lavatories

E. Course content
   1. Number of objectives, skills, and concepts to be taught
   2. Tasks/subtasks which operationalize objectives
      a. Number
      b. Success criteria
      c. Requisite conditions of performance
   3. Time constraints
   4. Reading levels required
   5. Math levels required, if applicable
   6. Order of presentation
   7. Rate of presentation

F. Lesson plans
   1. Selection and sequencing of tasks/subtasks
      a. For use by entire class
      b. For use by individual students

G. Text, manual, workbook

H. Teaching materials and aids for teacher use

I. Learning materials and aids for teacher use

J. Classroom management procedures

K. Teaching procedures
   1. For use with entire class
   2. For use with the handicapped student on an individual basis -- techniques for providing feedback concerning performance

L. Testing students for mastery of course material
   1. Content
   2. Procedures

M. Recordkeeping
   1. Type
   2. Quantity

N. Grading and techniques of monitoring progress -- types, criteria

O. Emotional climate of classroom
   1. Feelings of nonhandicapped students
   2. Feelings of handicapped students
   3. Teacher's feelings

P. Support services
   1. Types required
   2. Availability
      a. In-house services
      b. Outside agencies

Q. Coordination of professional services to students
   1. Role definition
      a. In-house professionals
      b. Outside agencies

R. Administrative policy
   1. Class placement
   2. Grading and graduation requirements
   3. Support services
   4. Time factors
      a. Open entry/exit
      b. Fixed enrollment periods
      c. Limits for completion

S. Employer contact and job placement
   1. Students' role
      a. Job seeking skills
      b. Interviewing skills
   2. Staff role -- definition, scope

T. Followup
   1. Role definition
   2. Planning

The problem resolution phase of the inservice process is presented in several learning modes: (a) a hands-on experience, which might include classroom practice in the determination of instructional objectives, task analyses and sequencing exercises, construction of instructional materials, development of a list of survival vocabulary for the trainees' courses, and the analysis and appropriate modification of tests and manuals: (b) a field trip to other classes or rehabilitation facilities in which emotionally troubled persons are receiving skill training (where possible, the trainees are paired with people teaching a similar or comparable skill); and (c) classroom presentations, which can include audiovisuals, visuals, handouts, and resource people.

The staff of the Wisconsin Vocational Studies Center has developed a series of visuals that are designed to assist the trainer in presenting problems frequently experienced by emotionally troubled learners in classroom situations and strategies designed to overcome these problems. Included are problems related to self confidence, self esteem, personal isolation, and behavior excesses.

The visuals are intended to serve as the framework for a class presentation that would elaborate on both the problems likely to be encountered and the possible solutions for them. The rate of presentation and depth of elaboration can be tailored to the needs and desires of each group of trainees. The visuals can also serve as the catalyst for a review and summary of information presented.

TEACHING THE LEARNING DISABLED

The goals of the prescriptive programing approach and the inservice process for preparing instructors to teach the learning disabled are similar to the process defined in teaching the emotionally troubled. The visuals give details of the steps necessary to prepare vocational teachers to teach the learning disabled. Teacher awareness of the problems of the learning disabled cannot be taken for granted. Teachers must be made aware of the differences between the learning disabled and the nonlearning disabled student. This can be accomplished by using paper and pencil techniques and visuals designed to give teachers an idea of how learning disabled persons may function in the classroom. Teachers must also learn to identify learning disabled students in the classroom. They can be helped in this by providing them with indicators that may give clues to the presence of a learning disability.

Following the awareness and identification of learning disabilities problems, the "open road" solution is proposed. This paradigm expresses the idea that if the visual, auditory, or tactile learning paths are blocked, another avenue of learning must be used. Teaching techniques are identified which will help compensate for the blocked learning modes.

A session on changing attitudes of learning disabled students and the attitudes of their classmates toward them is appropriate at this time. Completion of the attitude session should lead to a discussion of how the auditory, visual, and tactile learners can overcome blocked learning avenues by using alternative learning methods. At this point participants are ready to design instruction for individual students with specific learning disabilities.

PREPARING TEACHERS TO WORK WITH HEARING IMPAIRED STUDENTS

To prepare vocational teachers to instruct hearing impaired students, the Vocational Studies Center staff employs a training sequence similar to that used to prepare teachers to work with emotionally troubled students. The sequence consists of an awareness phase, a reassurance phase, a problem definition process, and a problem resolution process.

The awareness phase attempts to simulate the experience of hearing

loss through recordings, ear muffs, or other equipment. The reassurance phase solicits success experiences that trainees may have had with hearing impaired students. The reassurance phase carries over into the problem definition and problem resolution processes by drawing out and resynthesizing what the trainees already know about presenting their course materials in a visual, kinesthetic, or tactile format. During the problem resolution phase hands-on tasks, resource people, and class presentations are used.

The Center staff has also produced a set of visuals designed to aid in the class presentation segment of the problem resolution phase. The content of the visuals serves to structure the trainees' thinking concerning possible strategies in the areas of: (a) classroom arrangements, (b) the teaching process itself, and (c) the provision of needed support services.

Each visual can function as the stimulus for a more in-depth presentation of the problems encountered in these areas and potential solutions which could be employed by the teacher.

MATERIAL COLLECTION, DEVELOPMENT, AND DISSEMINATION

The Wisconsin Vocational Studies Center operates a free loan library of handicapped and special education materials for Wisconsin residents. Nearly 3,500 items from throughout the nation have been collected during the past four years. A bibliography entitled Vocational Education Resource Materials, A Bibliography of Free Loan Materials for Handicapped and Special Education, (1978) has been published and distributed in the state. These materials have proven valuable in providing an awareness of the needs, capabilities, and characteristics of handicapped people and in modifying programs to meet those needs.

The Center staff continues to develop materials as time allows.

Currently under development is a series of publications designed to assist vocational educators in their efforts to instruct handicapped learners. The content ranges from awareness of the particular disability to classroom teaching techniques.

Publications on visual impairment, hearing impairment, physical disabilities, emotional disabilities, drug abuse, and alcohol abuse have been completed and are being distributed to Wisconsin teachers. A series of sound filmstrips has also been produced. These examine the steps involved in modifying vocational programs for students with various disabilities according to a diagnostic prescriptive format.

The bibliography, the publication series, and the filmstrip package are available for purchase on a cost recovery basis.

FIGURE 1. Class Survey.

WISCONSIN VOCATIONAL STUDIES CENTER
UNIVERSITY OF WISCONSIN-MADISON

Name_____

Job Position_____

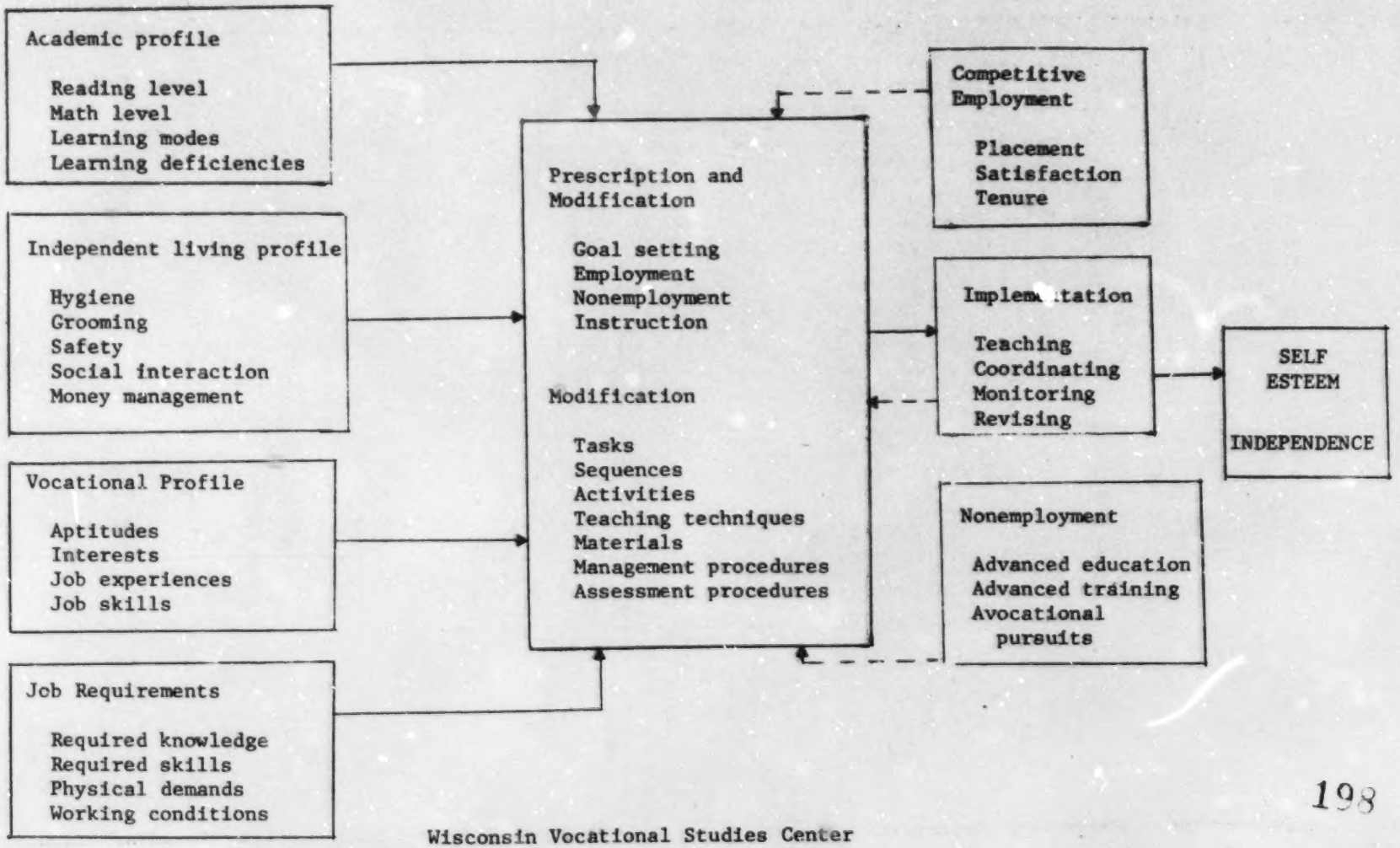
Professional Development Course on
Program Modification and Prescriptive Teaching for Handicapped Students

Please review the following topic areas and mark those that you would most like to learn more about:

Training Content Areas \ Disability Areas	Physical Disability	Mental Disability	Hearing Impairment	Visual Impairment	Emotional Disturbance	Learning Disability	Drug/Alcohol Dependency	Speech Disability	Ex-Offenders	Language/ Cultural Disability	Multiple Disabilities
Awareness of needs, characteristics, and capabilities											
Evaluation: strategy, techniques, utilization											
Adaptation of classroom and building facilities											
Modifying curricula appropriately											
Specialized teaching techniques											
Job placement strategies											
Role of other agencies in serving people with handicaps											

1. What specific objective do you wish to achieve in this course?
2. Have you had handicapped students in your classes?
3. What are some of the problems which you have had in teaching the handicapped?
4. What formal training and/or work experience have you had with handicapped students?
5. Please list the resource persons whom you feel would contribute to the success of the class.

FIGURE 2. Model for Development of an Educational Prescription.



Wisconsin Vocational Studies Center
University of Wisconsin-Madison

PROJECT RETOOL: A NATIONAL ANALYSIS OF THE STATE OF THE ART OF CAREER EDUCATION FOR THE HANDICAPPED

Harold W. Heller
Jeffrey Schilit

Project RETOOL is a national continuing education effort funded by the Bureau of Education for the Handicapped, focusing on active teacher educators in special education. A career education component was added to the project in an effort to facilitate a better understanding by teacher educators in special education of the concepts and constructs underlying career education for the handicapped. The career education component of Project RETOOL has four main objectives:

1. Continuing education of teachers and teacher educators to understand and implement career education for the handicapped.
2. Development of positive teacher and teacher educator attitudes toward career education for the handicapped.
3. Consolidation of special educators and vocational educators in a working relationship to develop career education programs for the handicapped.
4. Use of the concept of career education in the placement of individuals with handicaps in the least restrictive settings.

NATIONAL ADVISORY COMMITTEE

A national advisory committee was instituted to focus the direction of Project RETOOL toward the pursuit of these objectives. Those selected to serve were Donn Brolin, University of Missouri-Columbia; Oliver Kolstoe, University of Northern Colorado; Betty Ross-Thomson, Division of Instruction, Bureau for Exceptional Children, Wisconsin State Department of Education, Madison; Charles Kokaska, California State University, Long Beach; and Jeffrey Schilit, Department of Exceptional Student Education, Florida Atlantic University, Boca Raton.

At its initial meeting in August 1976, the advisory committee determined that the first and primary effort undertaken by Project RETOOL - Career Education - would be a national needs assessment of persons employed in career education. The needs assessment was considered necessary to determine what areas were most crucial and critical for university and college teacher educators to adequately prepare their students to serve the handicapped in career education capacities. The national advisory committee termed the needs assessment "a national state of the art."

NEEDS ASSESSMENT

Procedures

The needs assessment was conducted using the following six steps:

1. Six individuals involved in career education for the handicapped were selected (one from

each of the existing RETOOL regions) from names submitted by the national advisory committee. These regions and their assigned career education experts were:

a. New England (David Gardner) --Massachusetts, New Hampshire, Connecticut, Rhode Island, Maine, Vermont.
b. Northeast (Henry Colella)-- New York, New Jersey, Maryland, Pennsylvania, Delaware, Puerto Rico, the Virgin Islands.
c. Central (Preston Smeltzer)-- Wisconsin, Michigan, Illinois, Indiana, Ohio, New Mexico, Texas, Oklahoma, Arkansas, Louisiana, Minnesota.
d. Northwest (Gary Meers)-- Iowa, Kansas, Missouri, Nebraska, Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming.
e. Southeast (Cary Reichart)-- Florida, Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.
f. West (Bruno D'Alonzo)--Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington, American Samoa, Guam, the Trust Territories.

2. The six career education experts were responsible for conducting needs assessment within their assigned regions. Each contacted a stratified sample of individuals who were field based and providing career education, either directly or via ancillary services, to the handicapped. Those contacted included special education teachers, ancillary support personnel, vocational educators, vocational rehabilitation personnel, local and state education agency personnel, university and college personnel, and other individuals who serve a specialized segment of the handicapped population.
3. Each regional expert was asked to develop a structured needs assessment instrument that would secure the data appropriate for a true state of the art analysis.
4. Each of the regional experts presented their needs assessment instruments to the national advisory committee and project director at the 1977 Convention of The Council for Exceptional Children in Atlanta. A synthesis of the six instruments was realized resulting in one final instrument for purposes of the national needs assessment.
5. The regional experts administered the instrument to persons identified in step 2 within their regions.
6. The findings from all six regions were analyzed by the advisory committee in order to determine on a national scale the needs in career education for the handicapped.

The findings from the state of the art needs assessment continue to serve as a focus for the programmatic effort of the career education component of Project RETOOL.

Subjects

The survey was sent to 1,200 individuals (200 per region) named by each of the six regional experts in his designated region. A total of 379 (31.5%) of the survey instruments were returned. The population ranged in age from under 25 to 65 years with a mean age of 37 years. The respondents included 268 males and 111 females. All of the respondents were college graduates, 49 with baccalaureate degrees, 264 with master's degrees, and 56 with doctorates. All of the respondents were actively involved in career education at various program levels. The professional roles of respondents ranged from classroom teachers to state department officials.

Analysis of Data

The data were analyzed according to: (a) demographics, (b) curriculum and instruction, (c) scope and breadth, (d) student information, and (e) opinions of future programmatic needs. Because the survey was concerned with the current state of the art in career education for the handicapped, a greater emphasis was directed toward the section dealing with future directions. The future directions section was analyzed using a Spearman Rho to assess similarities and differences among and between regional and national rankings on the future of career education for the handicapped.

Demographics. A total of 379 questionnaires were returned which presented the following composite of the typical respondent:

Sex--Male

Age--Between 26 and 35

Years taught--Between 6 and 10

Years employment outside education--
0 - 2

Years in career education--5 or more

Position--Vocational Director

Degree Status--Master's degree

Curriculum and Instruction. A number of both positive and negative statements were presented by the respondents. The following are examples of some of the positive findings:

1. Approximately 83% of the schools/agencies offered career education programing for the handicapped.
2. More than 60% of the schools/agencies have official policy statements on career education for the handicapped that speak to the general goals and specific objectives relating to each level within the system.
3. Over 77% of the schools/agencies had an administrator directly responsible for career education.
4. Curriculum material suitable for use with mildly handicapped individuals was available in 88% of the programs. Of the respondents 62% revealed that they augmented their activities by using community professionals on a regular basis as career education resources for the handicapped.

Some examples of negative findings were:

1. Less than 50% of the respondents indicated that they used field trips to the business, industry, or professional community as an instructional strategy.
2. While 57% of the respondents understood that they systematically evaluated their career education program, only 38% had the results in a published form.
3. Only 50% of the respondents indicated that they had an advisory committee specifically appointed for the development of a career education curriculum.
4. Surprisingly, only 32% of the respondents indicated that published followup data were available on work and educational placements of handicapped graduates of their programs.

The survey also indicated that the respondents viewed career education as essentially a secondary level program, which conflicts with the concept that career education is part of all education.

Scope and Breadth of Career Education. Twenty methods/activities were ranked in terms of the frequency of use in career education for the handicapped. The activities that ranked highest in terms of their occurrence on an

"almost always" basis were the following:

1. Help students develop an understanding of themselves and others.
2. Help students develop positive attitudes toward themselves, school, and work.
3. Help students become aware of employer expectations.
4. Provide opportunities for students to test their interests and aptitudes through paid or unpaid, actual or simulated work experience.
5. Help students assess their personal interests, aptitudes, traits, needs, and values as an aid to career planning.
6. Help students become aware of the many occupational options open to them.
7. Prepare all youth for a "next step" when they leave public schools, in either immediate employment or continuing education.
8. Help students learn to appreciate the personal, social, and economic significance of work.

The survey generally indicated that the schools/agencies tended to use those methods/activities they felt most comfortable performing.

Student Information Related to Career Education. Responses obtained suggested that a segregated career education for the mildly handicapped would be the exception. Most respondents indicated that teaching mentally handicapped students general job skills was more important than job specific skill development. Of the respondents 68% noted that job failure was related more to interpersonal reasons than the lack of specific work skills; 70% felt it was more important to teach the mildly handicapped to cope with and adapt to societal stress than teaching the student specific job skills.

The broad student objectives commonly held as appropriate for a comprehensive K-12 career education program were embraced by nearly all of the respondents' schools/agencies.

Future Needs. The respondents were asked to rank order 11 future needs with 1 indicating the highest priority and 11 the lowest. The needs were ranked in the following order:

1. Identify special skills for and train personnel in working with handicapped persons in career and vocational education settings.
2. Increase the variety and number of opportunities for handicapped students to explore the world of work in the community.
3. Provide comprehensive placement, career counseling, and followup services for handicapped persons.
4. Increase collaboration with business, industry, labor, government, and other community organizations.
5. Improve curriculum materials used by special educators for career education of handicapped persons.
6. Develop and expand both secondary and postsecondary career education programs for the handicapped with a supervised work experience component as a major thrust.
7. Develop special techniques for infusing career education concepts into K-life career education programs for the handicapped.
8. Develop alternative methods for helping handicapped persons make the transition from school to work more effectively.
9. Evaluate career education programs for handicapped persons more effectively.
10. Require every teacher to complete a specified program (inservice, preservice) in career education.
11. Improve the efficiency and effectiveness of the teaching-learning process by systematically researching and applying our extensive, modern educational technology in the classroom and the school system.

Only trends 2,7, 10, and 11 were found to be somewhat consistent across

regions. The ranking of these trends would tend to indicate that after the highest priority, the regions were reflecting areas of importance specific to their part of the country. The results did indicate a high degree of consensus between regional rankings and the national composite ranking.

SUMMARY

The findings of the state of the art needs assessment clearly indicated that career education is an area of high interest across the country. What was most apparent, however, was the lack of consensus as to the individual future needs of career education for the handicapped when viewed from a national perspective. The only future need that was consistently ranked at a high level was: "identify special skills for and train personnel in working with handicapped persons in career and vocational education settings." Three other needs indicated consensual thinking; however, they were the needs ranked 7th, 10th, and 11th, respectively.

More specifically, the state of the art assessment determined that professionals involved in career education for the handicapped in various geographic regions of the country hold their own divergent value system in terms of future needs. However, this lack of a singular series of future directions should not be cause for alarm or disappointment. What the assessment indicated was that major trends do exist in the area of career education for the handicapped which must be addressed. Their importance must be weighed in terms of geographic location, career opportunities, trained personnel, and program support from the local level to the state level.

As a result of the needs assessment, the state of the art of career education at the time of the survey was such that the following recommendations were warranted:

1. High priority should be given to increasing teacher training efforts in the career education of mildly handicapped youth.
2. High priority should be given to establishing procedures that will insure increased involvement of the community in the career education process.
3. Efforts should be increased to insure appropriate evaluation of the various career education methodologies and the dissemination of the results.
4. High priority should be given to funding curriculum development projects that will yield validated curriculum products and materials for use with mildly handicapped students in career education programs.
5. High priority should be given to efforts to increase available state, federal, and local funds for developing comprehensive career education programs.

In summation, the need for a component of Project RETOOL to address the problem of providing contiruing education to teacher educators in special and vocational education was clearly justified. It is hoped that an effective program of continuing education for teacher educators in special education regarding career education for the handicapped will alter the state of the art in a positive direction. If so, Project RETOOL will have served a significant role in furthering the development of the nation's handicapped individuals.

CAREER SERVICE SYSTEM FOR EXCEPTIONAL PEOPLE: AN OVERVIEW

Gordon C. Krantz

This paper describes one means of presenting an overview of the career service system for exceptional people in order to create a well oriented design for service, a coordinated and purposeful implementation of service that transcends agency lines, and a realistic optimism about possible accomplishments. A descriptive approach is necessary here because the actual means of presentation are in a participatory workshop format.

The main tool of the presentation, a programed booklet, bears the potentially misleading title of "REHAB: Simulated Action and Decision." The title is, however, not intended to refer to an agency but rather to a broad array of technologies or things that we know how to do on behalf of handicapped people. REHAB describes services without restrictions as to which of society's agencies provide those services.

The relation of this to career education is that the technologies are those that facilitate the guidance/diagnosis, preparation, and outcomes of handicapped people in pursuit of careers. Many of the technologies are most often practiced by people who, whether or not they think of themselves as such, are de facto career educators. The other technologies are practices in close association with career education, and are increasingly being incorporated into the practice of career education itself.

TECHNOLOGIES

The guidance and diagnosis technologies include ordinary guidance and counseling, intensive or clinical guidance, vocational evaluation - and the decisions about which ones will be most effective. The preparation technologies include personal training services or personal adjustment or social training, work adjustment services, skill training - and the decisions about which ones will be most effective. The outcome technologies include competitive employment, sheltered employment, work activity, adult daytime activity, home activity, or optimum personal independence - and the decisions about which is optimum in this case at this time in career.

All of the technologies have reasonably well accepted definitions and some are defined by law. Some, such as skill training, appear in professional literature that is several decades old. Two others, vocational evaluation and work adjustment, are the focus of a professional journal that is now in its 11th year of publication. Others are more poorly documented, but all are definable.

The decisions, though less commonly described as technologies, are still a critical and indissoluble set of system components. Failure to consider them or consciously make them can greatly inflate the cost of

the service system. Deliberate provision of options for decisions, and their sequential use, can lead to a significantly more cost beneficial career service system.

When the actions and decisions are assembled into a well articulated system, they differ from a glossary in the same way that a brick house differs from a brickyard. Taken as a whole, REHAB is a somewhat idealized model of the current state of the arts that facilitate career development of handicapped people.

REHAB, then, is claimed to be a model that gives an overview of the career service system for exceptional people. The system, of course, preexisted and continues to exist; the model is only a description of that system, distorted in the direction of most effective structure to encourage improvement in the use of the system. Any aggregate of entities or actions that interact is a system, as long as a line of some kind can be drawn around them. The issue here is what model or description of the system is most useful for giving an overview, a cognitive map, of the service system so that effective work can be done with individuals and in the design of service programs. The model type chosen for REHAB was that of the action and decision model, reduced in its ultimate to a flowchart whose elements are actions or technologies defined in standard terms and decisions that must be made at certain points and can be reasonably made at only those points.

REHAB ALGORITHM

REHAB began in 1959 as an attempt to describe the local service system with which a sheltered workshop interacted (Krantz, 1959). It was restated in relation to a school rehabilitation project (Deno, Henze, Krantz, & Barklind, 1975) and later that year was changed from an open, horizontal schematic to a flowchart. Later, it was built into an interactive computer game for the purpose of orienting beginning rehabilitation counselors to the complex of services in which they and related agencies would be engaged (Krantz, 1970). Then, to meet a need for greater portability and simultaneous use with several learners, it was made into a semiprogramed 54 page booklet. It was that booklet, together with a 3 hour learning process that had been developed for it, that was adapted for presentation at the Topical Conference in St. Louis.

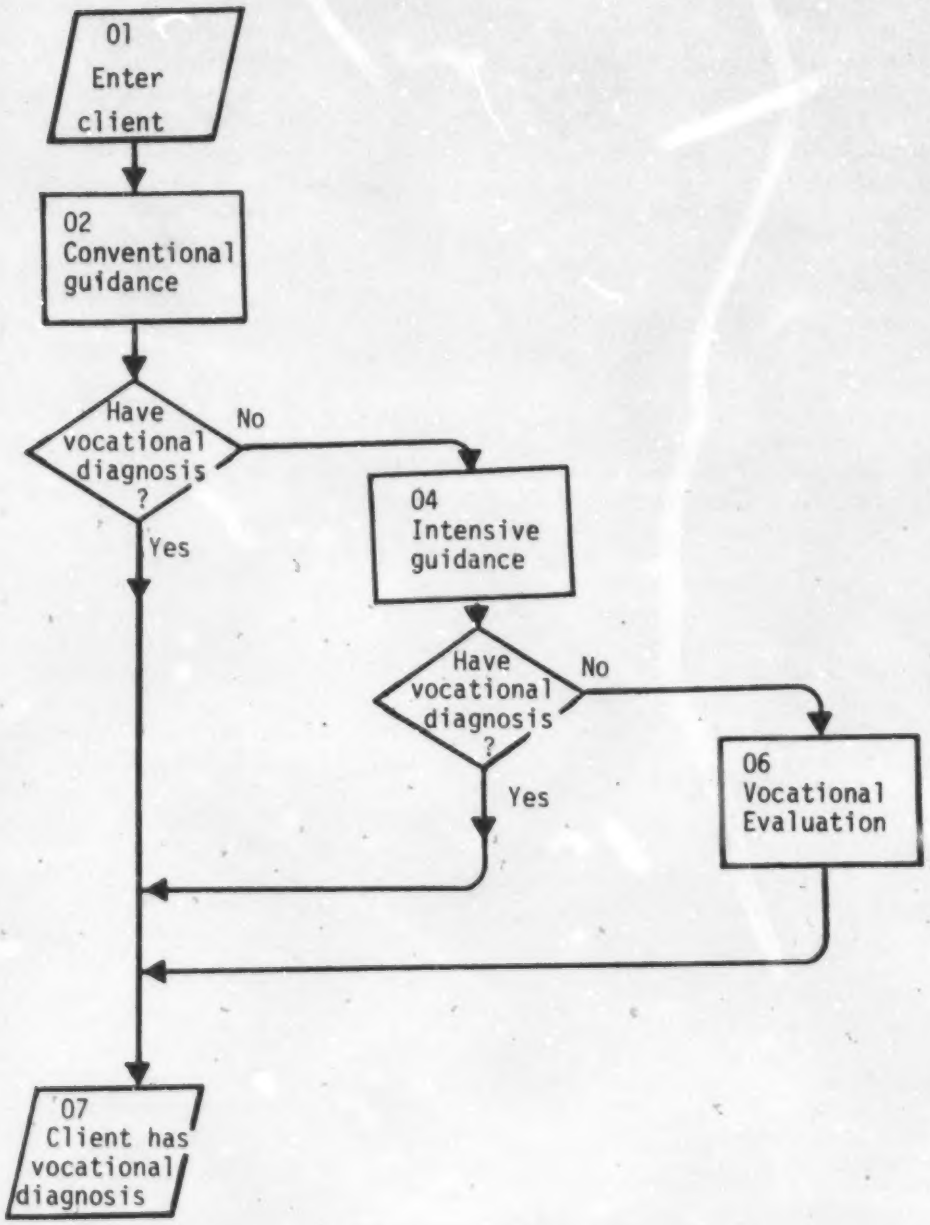
A learning process has been found to be necessary. Although all of the content, structure, and definitions are in the booklet, experience has indicated that the person seeking an overview will not gain maximum knowledge unless led through the process in a structured manner. The process will be described before the content of REHAB is illustrated.

The Learning Process

First, a brief verbal coverage is made of the service system. The participants do not typically learn anything new at this stage, since the first objective is to mark off the career service system from other and more general human services. Then, the participants are introduced to thinking in terms of an algorithm, a "precisely stated procedure or set of instructions that can be applied in the same way in all instances of a problem" (Lewis & Papadimitriou, 1977). Before encountering the more complex REHAB algorithm, the participants are led to analyze simpler systems of action and decision, such as what one does and decides when meeting a stranger on a lonely moor. System thinking of this kind is learned well enough to play the REHAB simulation.

The services in the career system for handicapped people are then discussed in a way that is compatible with the structure of REHAB but does not duplicate it. The level of vocabulary and amount of definition of terms

FIGURE 1. The First Segment of the REHAB Algorithm.



is adjusted ad hoc to the sophistication of the participants. Some compromise on this is usually necessary, because most participant groups are mixed in their membership.

Client Simulation

The REHAB booklet is then distributed. Participants are told to visualize one of their clients or to make up a client, and to start at the beginning of the booklet and carry out the actions and make the decisions with that client as the steps are described in the text. The actions are presented in the order that they are usually carried out in the real world. The right hand page is the working text, telling the participant what to do, and the left hand page offers definitions of the technologies and other supplementary information. With the first decision that is encountered, the simple linear order changes; as in the real world, at a decision point one may go one way or another, but not both. The booklet tells the participant what page to go to if the decision is "yes," and what page to seek if the answer is "no." The right margins are numbered and notched in order to facilitate flipping pages. There are no right or wrong answers, because the purpose of REHAB is to teach an overview rather than to teach diagnostic skills. Participants often are troubled by the fact that the REHAB program will not "tell them whether they guessed right," and, in the group presentation, the instructor must usually circulate to reinforce the participants and to reiterate instructions.

A single hypothetical client is simulated through the service system in this way. There are no blind alleys in REHAB, and for every situation there is an answer. This can be so because, in the real world that is described, our society has devised technologies that speak to every career need, however imperfectly. There is no such thing as an unfeasible case (though particular agencies must turn down particular people -- but that is not what this game is about), and this fact is one of the major lessons to be learned in the simulation. Neither is there any client, in the real world or in the REHAB model, for whom there is no optimum career outcome at plateau time.

Review Function

A review function is built into REHAB. For example, if work activity is used in the simulation of outcome for the hypothetical client, the booklet directs participants to a page which says, "The law requires that the client be reviewed every six months while in work activity to verify that the placement continues to be appropriate," and then directs him or her to the page which says, "If and when your client's status should be changed, go back to the part of the decision program that offers vocational diagnosis, starting on page 02, and make the appropriate decisions."

The participants can continue to simulate the career of the same client, or a new start may be made with a new hypothetical client. The participants are encouraged to make several runs through the system with clients presenting a variety of circumstances, in order to encounter the many combinations and alternate decisions that are possible. With its 10 technologies and 10 decision points, REHAB presents at least 120 different career paths, not counting the review function. Only one allowed path is logically contradictory, and an advanced learning activity is to find it.

Recovery and Synthesis

After about an hour of simulation, with circulating instructor and suitable breaks in the activity, the final step of the presentation is undertaken: the recovery and synthesis of the REHAB algorithm. For this, worksheets and flowcharting

templates are provided. The first task for the participants is to lay out the actions and decisions that comprise the vocational diagnostic section of REHAB. This section begins with, "Ready? Ready or not, here comes your client," and ends with "You and your client now know, as well as you can, what course of action (preparation and/or outcome) to take at this time." Instructions and help are given, and no group has been unable to draw flowcharts after the preparation described. Volunteer participants then describe what they have drawn, and the instructor reproduces and critiques what is being described. In its more elegant form, the product of this task is shown in Figure 1. The reader will recognize this paradigm as similar to the one proposed by the state of the art document of the Vocational Evaluation and Work Adjustment Association (Dunn, et al., 1975), and it is adapted from an earlier version (Krantz, 1966).

Preparation and Decisions

The participants next recover the section of REHAB that deals with preparation technologies and decisions. As before, this is done by reproducing the content and structure of REHAB in a flowchart and following the booklet's instructions. The process sounds more difficult than it generally proves to be. Again the flowchart is described by and displayed for the participants. When the preparation section is completed, the hypothetical client is ready for movement into an outcome plateau of long or short duration.

Outcomes/Plateaus

The third and last section of REHAB, excluding the review function, deals with the array of outcomes or plateaus. Again, the participants recover it and have it critiqued and displayed.

The complete service system is then displayed as a single flowchart. Each participant will have worked out the three sections, and the overall chart is an easily grasped overview. A brief discussion completes the presentation.

IMPLICATIONS

To what purpose might a participant go through these procedures? What benefits might be expected, and by whom? At the time of this writing, only partial answers can be given to those questions.

Some of the answers are frankly theoretical. It was the author's intent to present an overview that would give useful orientation to novices, promote communication among people who jointly serve in different disciplines or jointly plan for effective integration of agency programs, and even provide a master template for caseload management and management information systems. To an extent that is still unknown, some of those intents may be fulfilled.

The results of a recent user evaluation provide another partial answer. The process was carried out in two sessions with a large class of upper division and graduate students in a special education course at the University of Minnesota. Forty-five written evaluations were completed. The students were asked to self report their pre- and post-REHAB familiarity with the career service system for handicapped people. Half of them were practicing teachers, with one fourth of the total group being experienced in special education; one third were preservice; and one out of ten was the member of a noneducation profession.

The participants were asked to indicate their judgment of their pre-REHAB familiarity with the service system as reflected in these self descriptive statements: I was not at all familiar with the vocabulary, options, sequences; I knew the system in general, but could not describe it clearly; I knew or had used/practiced a part, but not most, of the system; or I knew the system

as well as it was presented. Later in the evaluation questionnaire, they were asked to report their post-REHAB familiarity with the service system, responding to the same four options (with suitable change of tense). Comparison of pre- and post-REHAB self reports showed the claims of: loss of one level, 1; unchanged, 0; gain of one level, 22; gain of two levels, 19; and gain of three levels, 3. Self report is notoriously subject to bias, but the results do at least show a claim of learning benefit.

SUMMARY

The presentation described here is intended to give an overview of the entire career service system for handicapped people, and to do so in well organized and essential form. The presentation process is intended to maximize the participants' internalization and incorporation of the overview. The interactive computerized version has not been formally evaluated; but, early and limited evaluation of the printed version is encouraging.

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AN INSERVICE MODEL FOR IEP DEVELOPMENT IN CAREER EDUCATION FOR THE MILDLY HANDICAPPED

Allen A. Mori

According to the US Department of Labor, unemployment among the handicapped is nearly 30 percent. Another 40 percent of this population is underemployed. The reason for this grim picture is rather obvious. School district programs have concentrated their efforts on the young handicapped child and, to a great extent, have neglected the needs of adolescents. The passage of Public Law 94-142 (The Education for All Handicapped Children Act of 1975) guarantees that all handicapped children will have an educational program germane to their specific needs. Included among the needs of the handicapped learner is the provision of appropriate experiences in career and vocational education.

In order to ensure that a broad range of appropriate occupational exploration and preparation options are open to handicapped learners, special educators must be prepared to provide prevocational experiences and early work observation and experience programs both in school and out of school. The increased emphasis on career education for the handicapped will necessitate that secondary-level personnel acquire competencies in instructional, assessment, and counseling skills in addition to those required to develop work stations and the coordination of work-school experiences. Unfortunately, many school districts will have difficulty in providing an appropriate education to secondary-aged handicapped pupils. Most professional personnel at the secondary level lack the specific competencies to plan appropriately for the career and vocational needs of the handicapped. This is not the fault of the school districts, for the blame must be shared equally by state certification boards, which do not require any specific competencies for personnel who provide vocational programing for the handicapped, and universities, which have been extremely slow in developing personnel preparation programs to meet the demand for special needs programs. Yet, research supports the notion that the mildly handicapped will have a relatively good vocational adjustment, particularly if provided with occupationally oriented training (Kokaska, 1968; Strickland, 1967; Kidd, Cross, and Higginbotham, 1967; Chaffin, Haring, and Smith, 1967; Chaffin, Davison, Regan & Spellman, 1971; Oswald, 1968; Halperr, 1973).

The inservice training of professional personnel to meet the vocational programing needs of handicapped learners has emerged as a significant priority. The remainder of this paper describes a cooperative inservice training program in career education

between the Clark County School District, Clark County, Nevada, and the Department of Special Education, University of Nevada, Las Vegas.[1]

INSERVICE PROGRAM DEVELOPMENT

The planning and implementation of this project is diagrammed in Figure 1. It should be noted that the crucial details involved in implementing the project in the school district were worked out in numerous meetings with central office administrators including the associate superintendent of secondary education, the associate superintendent of administration, the deputy associate superintendent of special student services, the director of special student services, the director of vocational education, and the project director. After these initial meetings, the directors of special student services and vocational education continued to work closely with the project director to form the team and maintain coordination of the project.

The next step involved a presentation of project details to the principals of the seven target high schools. While participation in the project was voluntary, an effort was made by the team to select high schools which represented the five geographic zones of the county, one rural school, and the area vocational technical school (AVTS), where a pilot program was initiated in 1978 with the placement of a learning disabilities specialist functioning as a resource person. At the meeting with the principals the goals, objectives, and anticipated outcomes of the project were presented:

Goals

- Identification of and training in the competencies necessary for establishing appropriate programing in career and vocational education for the handicapped.
- Establishment of administrative support (building principal level) for program development and implementation.
- Development of awareness of ancillary personnel (counselors) to the career and vocational needs of the handicapped.
- Promotion of the importance of career and vocational education for the handicapped.

Objectives

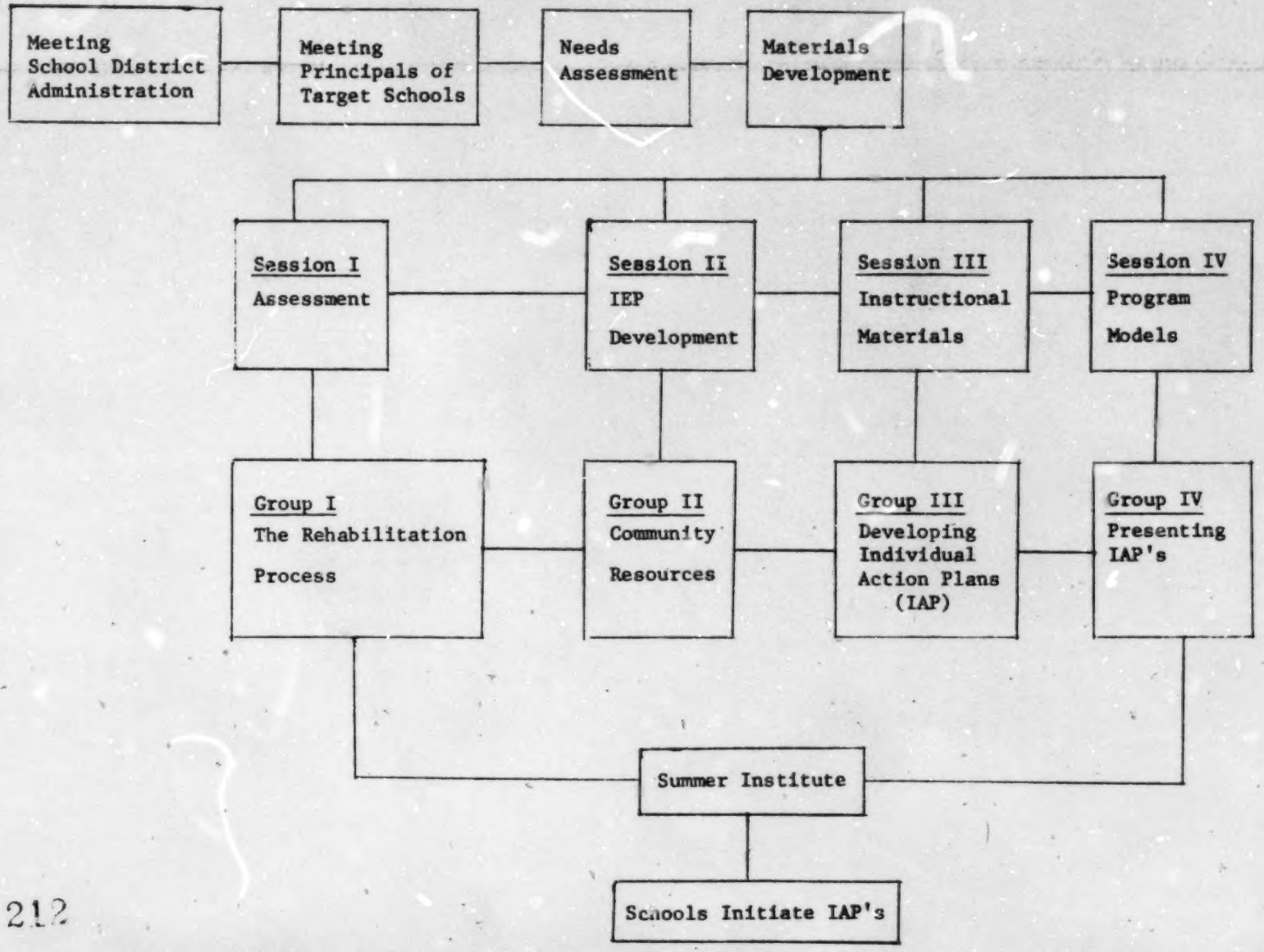
- The determination of the training needs of secondary teachers of the handicapped in career and vocational education.
- The provision of specific training to address the identified needs and competencies.
- The establishment of individualized education programs for individual students in the participating schools.
- The establishment of individual action plans focusing upon long range program planning and implementation for each participating school.
- The involvement of building principals and counselors in planning for and coordinating teachers' efforts to provide career and vocational education services for handicapped youth.
- The provision of continuous formative evaluation of the effectiveness of all project components and operations.
- The dissemination of all essential project information to stimulate external evaluation or replication as well as to foster awareness of the needs and goals of career and vocational education programs for the handicapped.

Anticipated Outcomes

- That mildly handicapped pupils will be better prepared to enter the district's mainstream Cooperative Education Program.
- That the number of mildly handi-

[1]This project is supported by a BEH Personnel Preparation Training Grant No. G007801566.

FIGURE 1. Delivery model for inservice in career education for the handicapped.



capped pupils in the Cooperative Education Program will increase by 100 percent.
- That teachers will be better prepared to provide career education and write IEP's (Individualized Education Programs) in career education.
- That the participating schools will develop comprehensive plans for career education programs for their mildly handicapped pupils.

As a result of this meeting, all principals agreed to participate in the program provided their teachers would also agree to become involved. At meetings in the various zones, the project director provided an extensive orientation to the project which included the program goals, objectives, anticipated outcomes, content, and format. The teachers would receive credits for their participation as follows:

1. By attending the four evening sessions shown in Figure 1 as group sessions, the participants would receive one professional growth credit.
2. By attending the summer institute for one full week, participants would receive three graduate credits in special education from the University of Nevada, Las Vegas. The project would provide stipends to cover the cost of the tuition.

Once again, all teachers (20 special education and two vocational-special education teachers) agreed to participate in the inservice training. At this point the project director administered a 100 item needs assessment survey. The needs assessment instrument, adapted from the National Workshop Professional Task Analysis Questionnaire and the Kent State University Competency Survey, had items in the following seven categories:

1.0 Assessment of learner needs
2.0 Planning for instruction
3.0 Implementing instruction
4.0 Classroom management
5.0 Coordination of job training procedures
6.0 Counseling
7.0 Evaluating student progress

Respondents were asked to provide three responses for each competency/task item: (a) importance, (b) frequency of use, and (c) need for further training. Sample items are provided as follows:

1.04 Determine student's occupational interests and aptitude.
2.04 Analyze an instructional sequence into small sequential steps (task analysis).
3.20 Develop and use simulated job applications and interview procedures.
5.13 Work with job placement counselor to provide and/or coordinate job placement services for special needs learners.

INDIVIDUAL SCHOOL SESSIONS

The project team analyzed the results of the needs assessment survey in order for the project director to begin to develop instructional materials for the individual sessions in the schools. As noted in Figure 1, the project director traveled to each project school for a full day of inservice instruction. Substitutes were provided through grant funds so that teachers were freed from their normal daily assignments.

While there were variations in the training needs both by school and certainly by individual teacher(s), instruction during the individual school sessions focused upon the following areas: assessment; IEP development; teaching methods and instructional material development and selection; and program development and implementation (in this sense, the means available to provide

students with actual occupational experience and training).

While there were these variations, content in each of the individual sessions may be generalized as follows:

Session I -- Assessment

- Overview of career education for handicapped
- Definition of terms (i.e., career awareness, exploration, career clusters, etc.)
- Overview of criterion referenced assessment by areas (academic, communication, prevocational interests/aptitudes, psychomotor, social, and self help)
- Developing functional statements regarding current levels of performance

Session II -- IEP Development

- Preparing long range goals that accurately reflect student needs and career goals
- Preparing short term objectives that accurately reflect the means that will be used to assist the student in reaching the long range goals and also facilitate acquisition of entry level skills in chosen career cluster

Session III -- Teaching Methods and Instructional Material Development and Selection

- Utilizing individualized instructional methods
- Developing contingency contracts
- Conducting parent conferences
- Determining reading levels of materials
- Developing materials for instruction
- Selecting materials for instruction

Session IV -- Program Development and Implementation

- The area vocational technical school concept
- The Cooperative Education program
- Work-study programs
- Placement options in the community
- Job analysis

GROUP SESSIONS

As each of the individual school sessions concluded, the project team and the local consultant-facilitators (a professor of rehabilitation counseling at the University of Nevada, Las Vegas and the director of a community agency providing service to the mentally retarded) provided instruction, conducted discussions, and facilitated group interaction activities around the following topics: the rehabilitation process; employing resources in the school district and community; developing individual school action plans (IAP's); and the presentation of the IAP's.

Group Session -- The Rehabilitation Process

Information was provided during this session on the rehabilitation process and status system. Participants also viewed a 45 minute videotape portraying the rehabilitation process from intake to successful employment, and engaged in group discussions focusing

on means to involve more public school special needs students in the rehabilitation program.

Group Session II -- Employing Resources in the School District and Community

Participants heard presentations on the Cooperative Education Program, the AVTS, and other community agencies providing vocational/rehabilitative/assessment services in the community. Additionally, the project team brought in the coordinator and liaison to the school district from the Division of Vocational Rehabilitation. As a result of this session, tentative plans were drawn to have the intake facet of the rehabilitation process initiated right in the high schools.

Group Session III -- Developing Individual Action Plans (IAP's)

Since there is not a singular career education program for the handicapped either at the secondary level or K through 8, the project team decided to have each individual school draft a plan to provide comprehensive career/vocational training for its mildly handicapped population. During this session the schools, with the assistance of the facilitators, attempted to develop this plan including goals, objectives, resources needed, and a timeline for implementation beginning September, 1979.

Group Session IV -- Presenting the IAP's

During the final session, the individual schools presented their IAP to other participants, the principals, and central office staff. Discussions and questions centered around the implementation of these plans in each of the schools.

SUMMER INSTITUTE

During the planning of this project, the project team identified the need for a culminating experience for the teacher participants. The project director suggested that the team plan a special institute on career education. Each participant would then receive three graduate credits, with tuitions paid through the project. The project director identified and contacted five national consultants recognized for their significant contributions to the area of career education for the handicapped. Topics covered by the consultants during the five-day institute included:

- Philosophical and practical changes required to implement career education, K-12, in a large school district.
- The relationship between vocational and special education.
- Infusing career education into the total curriculum for special students.
- Program strategies to provide vocational training in a variety of settings.
- The work experience approach as a means of providing vocational training to the handicapped.

Institute participants included special education teachers, principals, counselors, mainstream teachers, central office administrators, and state education agency personnel. The institute was designed so that there were large group presentations as well as small group activities with ample opportunity for the participants to interact with the national consultants and the local consultant-facilitators.

PROGRAM EVALUATION

To date, the gathering of the evaluative data has not been completed.

However, in evaluating the project's group sessions component, the expected outcomes are changes in knowledge, the acquisition of special skills, and a positive change in attitude toward the vocational needs of handicapped youngsters. Evaluation is based on measures of satisfaction, measures of effectiveness, and documentation. The satisfaction of the group session participants will be measured with a questionnaire and rating scale for each session. Changes in knowledge and attitude will be evaluated through a pretest-posttest in which the content is based on a previously mentioned instructional content. A skill and procedures component evaluation will be conducted at the conclusion of the project.

The individual schools' program component and the summer institute will be evaluated along the same lines as the group sessions with measures of changes in knowledge, attitude, and skills. The individual school action plans, which will be generated during the group sessions and implemented after the summer institute, will be sampled and presented as documentation.

PROJECT CONTINUATION

During the second year of this project, inservice training will be provided to special education teachers in the junior high schools that serve as feeders to the senior high schools selected for the initial training. The focus of the third year of funding will be the elementary schools which serve as feeders to the secondary schools where training was previously conducted. While content will be largely determined through the needs assessments conducted at the beginning of the school year, it is anticipated that training will focus on infusing career education content in all aspects of the curriculum.

It is anticipated that the service delivery model shown in Figure 1 will again be utilized except that the group sessions will focus on content germane to the needs of junior high and elementary personnel.

CONCLUSION

There will continue to be a need for additional inservice (as well as preservice) programs to assist special education teachers in planning and implementing appropriate educational experiences to meet the career and vocational needs of handicapped students. It appears that this special project has been enthusiastically received by both participants and administrators with the likelihood that close cooperation between the school district and the university will continue to grow for the mutual benefit of all parties.

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SUMMARY REPORT FOR TWO NATIONAL WORKING CONFERENCES ON CAREER DEVELOPMENT FOR THE HEARING IMPAIRED

Richard C. Steffan
Judy Egelston-Dodd

The handicapped face many barriers to successful career development. Deafness, like sex, is a handicap that is regarded by society as a barrier to obtaining certain jobs. Hearing impaired individuals are found in jobs that perpetuate sterotyping of occupations. Career education exposures that have been planned and implemented with their type of handicap in mind (Munson & Egelston, 1974) are particularly important for deaf persons. Junior high school aged deaf adolescents are reportedly three times more likely to stereotype occupations by sex than are their hearing peers (Egelston & Kovolchuk, 1967). A correlation study of freshmen at the National Technical Institute for the Deaf in Rochester, New York, revealed that students who stereotyped jobs by sex also regarded deafness as a limiting handicap (Egelston-Dodd, 1977).

Distributions of the majority of deaf students at Gallaudet College in Washington, DC, and the National Technical Institute for the Deaf enrolled in programs traditionally appropriate for their sexual identity show the effect of self selection and aspiration which are based on traditional stereotyped notions about the capabilities of deaf individuals (Cook & Rossett, 1975). When an individual feels that a particular job is inappropriate that occupation is as good as closed, because he or she will not aspire to that job as a personally potential occupation. The channeling of deaf males into machine or printing trades and of deaf females into keypunch operation or domestic duties is one result of the failure of schools and rehabilitative social and vocational services for the deaf to counteract the effects of this stereotyping (Egelston-Dodd, 1978).

NEED FOR CAREER EDUCATION MATERIALS AND METHODS

The need for materials and strategies for a career education effort that counteracts sexism, handicapping conditions, and other discriminatory societal influences has been documented by Stolte (1977). Deaf workers, particularly females, are not readily available as role models. Schooling for the deaf, even through the secondary level, emphasizes language development to the exclusion of other content. The business community views with pessimism the difficulty, inconvenience, and expense of communicating through an interpreter, learning manual communication, and installing teletype equipment to serve as telephone substitutes for potential deaf employees. The infeasibility and risk of a hearing handicapped person working with technical equipment has been cited as the rationale for the low participation of the deaf in careers in science and technology.

The symposium on Research and Utilization of Educational Media for Teaching the Deaf (Nebraska, 1973) focused on career education and innovative career and vocational learning activities. At the symposium, it was repeatedly shown that materials which are successful with hearing students are not necessarily successful with deaf students. Although such materials may be modified (captioned, edited) they do not offer the exposures and experiences that are essential in the education of deaf students. Rarely treated in sufficient detail are the kinds of work problems and attitudes that deaf workers encounter in the safety regulations, communications, and human relations aspects of a job.

TRENDS IN CAREER DEVELOPMENT OF DEAF INDIVIDUALS

A number of recent developments represent changes that impact fortuitously on career development for the deaf. These positive developments include (1) the success achieved by the National Technical Institute for the Deaf in providing skills and opportunities in many technical fields that were previously closed to the deaf; (2) public understanding of the deaf and their problems has increased significantly during the past few years due to television, anti-discrimination legislation aimed at all minorities, and a growing national concern for making all handicapped persons fully participating members of American society; (3) career education programs using the Comprehensive Career Education Matrix are being developed by the Model Secondary School for the Deaf and Kendall Demonstration Elementary School (both in Washington, DC) for grades K-12.

In order for these developments to augment the career potential of deaf learners, instructional developers and classroom teachers must have a firm grasp of the theoretical framework underpinning the career education movement. Egelston-Dodd (1977) summarized the field as revolving around four positions. On a narrow to broad continuum the first concept represents only the economic role of career education. Another position widely covered in the professional literature is the specific training required in the preparation for a job or some paid employment. A third concept that is most compatible with an intervention program for hearing impaired students includes teaching for employability and occupational education without limiting them to only the economic or work role. Career education, then, is both a comprehensive self development and decision making process. This concept evolves into position four which is a lifetime career development approach. The intent of this approach is that one's total life span is devoted to career development.

As we begin to view career development in its broader, more encompassing dimensions, we are better able to accept it as vital for human maturation and intellectual development. Research on self esteem and self concept of deaf children (Meadow, 1967) has suggested that children who have a positive self concept tend to achieve more. In the career education of deaf learners we should keep in perspective the disability caused by hearing impairment and highlight the identification and development of each student's individual attributes and skills.

ORGANIZATION OF THE WORKING CONFERENCES

In response to numerous requests from residential schools and programs for the deaf regarding the implementation of career education, a meeting was held by the Model Secondary School for the Deaf and the National Technical Institute for the Deaf with representatives from the Rochester School for

the Deaf, Marie H. Katzenbach School for the Deaf, and St. Mary's School for the Deaf. At this meeting, five major areas of need in career education of the deaf were identified:

1. The definition of career education for hearing impaired individuals needs to be clarified, particularly as it relates to vocational education.
2. Awareness of career education and its relevance for the hearing impaired needs to be heightened.
3. What we learn about implementing career education needs to be shared.
4. The most urgent areas for career development of hearing impaired students need to be identified.
5. The most urgent areas for career development of hearing impaired students need to be prioritized.

As a result of this meeting, two National Working Conferences on Career Development for the Hearing Impaired were conducted. The first, sponsored by MSSD, was held in Washington, D.C., in February 1978. The second conference, sponsored by NTID, was held in Rochester, New York, in September 1978. A total of 200 persons from residential schools and day programs experienced in career education participated in both conferences at which Dr. Kenneth B. Hoyt, Director, Office of Career Education, presented the keynote addresses.

Reading materials were sent to each participant approximately one month before the conference. The reading materials were selected to provide participants with a fundamental understanding of career education concepts as described by the Office of Career Education. This approach succeeded in eliminating the necessity of establishing a common framework during the conferences. The list of readings included the following monographs, written by Dr. Kenneth B. Hoyt, Office of Career Education, published by the US Government Printing Office:

- An Introduction to Career Education: A Policy Paper of the US Office of Education, 1975.
- Monographs on Career Education: K-12 Classroom Teachers and Career Education: The Beautiful People, 1976.
- Monographs on Career Education: Refining the Career Education Concept, 1976.
- Monographs on Career Education: Refining the Career Education Concept - Part II, 1977.

CONFERENCE RESULTS

In reviewing the results of the two National Working Conferences on Career Development for the Hearing Impaired it is appropriate to note the list of 26 issues in Table 1 and the urgency and importance rankings of the issues in Table 2, and identify how the results have been used as the basis for the MSSD/NTID National Project on Career Education

The ratings of urgency and importance listed in Table 2 were reported by teachers, administrators, and counselors in attendance at both working conferences.

The results of the urgency ranking by the participants of each conference show the need for inservice training and development of a comprehensive plan for implementation for both residential school and day programs. An interesting discrepancy exists for issue number 7, involvement of parents. A possible explanation of this discrepancy may be the wide territory covered by the state residential programs and the distance factor which prevents or severely limits the effective involvement of parents. It should be noted that results of the ratings for importance were combined because there were no significant differences between the results from the two conferences.

TABLE 1.

List of Issues

1. Better definition of career education.
2. Educate public about employability of the deaf.
3. Development of appropriate career education materials.
4. Proper balance of career education with remaining curricula.
5. Increase volume and availability of employment outlook studies.
6. Career education needs to continue after graduation.
7. Parents and families need to be more involved in career education process.
8. Include personal/social, job adjustment education.
9. Dissemination of successful programs and models.
10. Lack of funding.
11. Inservice training for staff.
12. Better use of community people and resources.
13. Greater visibility of good deaf role models.
14. More administrative commitment.
15. Expand work experience (co-op programs).
16. Infuse career education into regular classrooms, dorms, etc.
17. Include career education in preparation programs for teachers of the deaf.
18. Begin career education earlier and continue throughout schooling.
19. Establish clearinghouse for career education of the deaf.
20. Need job placement and counseling services after graduation.
21. Evaluation of success of career education programs.
22. Better career guidance and counseling.
23. Better correlation between secondary and elementary schools.
24. Comprehensive plan for implementing career education goals.
25. Improved coordination and work with vocational rehabilitation agencies.
26. Develop appropriate communication skills to increase employability and functioning in the community.

TABLE 2.

Rank Order of Urgency and Average Ratings of Importance for Top Eleven Issues Related to Implementing Career Education

Issue Number	Issue	Urgency			Average Rating of Importance*
		Combined	1st Conf.	2nd Conf.	
(11)	Inservice training for staff.	1	2.0	1.0	4.5
(24)	Comprehensive plan for implementing career education goals.	2	1.0	3.0	4.3
(8)	Personal/social education.	3	6.0	2.0	4.4
(3)	Development of appropriate career education materials.	4	4.0	6.5	3.9
(16)	Infusion of career education into regular classrooms and dorm programs.	5	3.0	8.5	4.2
(18)	Earlier start on career education with continued emphasis throughout schooling.	6	8.0	5.0	4.3
(14)	More administrative commitment.	7	5.0	9.5	4.0
(7)	Involvement of parents and families in the career education.	8	11.5	4.0	4.1
(9)	Dissemination of successful programs and models.	9	10.0	9.5	3.7
(2)	Educating the public about employability of the deaf.	10	8.0	13.5	4.3
(12)	Better use of community resources.	10	8.0	13.5	4.1

* These data are based on a 5-scale, with 5 being of critical importance and 1 being of no importance. The data were pooled and averaged for the combined conferences.

MSSD/NTID NATIONAL PROJECT ON CAREER EDUCATION

The results of the urgency ranking were also used as the basis for creation of the MSSD/NTID National Project on Career Education, which will focus primarily on developing inservice training for educators of the deaf and on developing technical assistance for involving school personnel in comprehensive planning for implementing career education. These concerns were ranked second and first in the first conference, and first and third in the second conference and are, therefore, the major focus of the development effort. The primary content of the inservice package now under development includes career education, planning and implementation processes, and delivery skills training.

The working conference participants determined what is left to be done to ready deaf students for successful career development. The project will address those needs, beginning with the most urgent, while creating a momentum that will spread nationally through regional, state, and local levels.

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